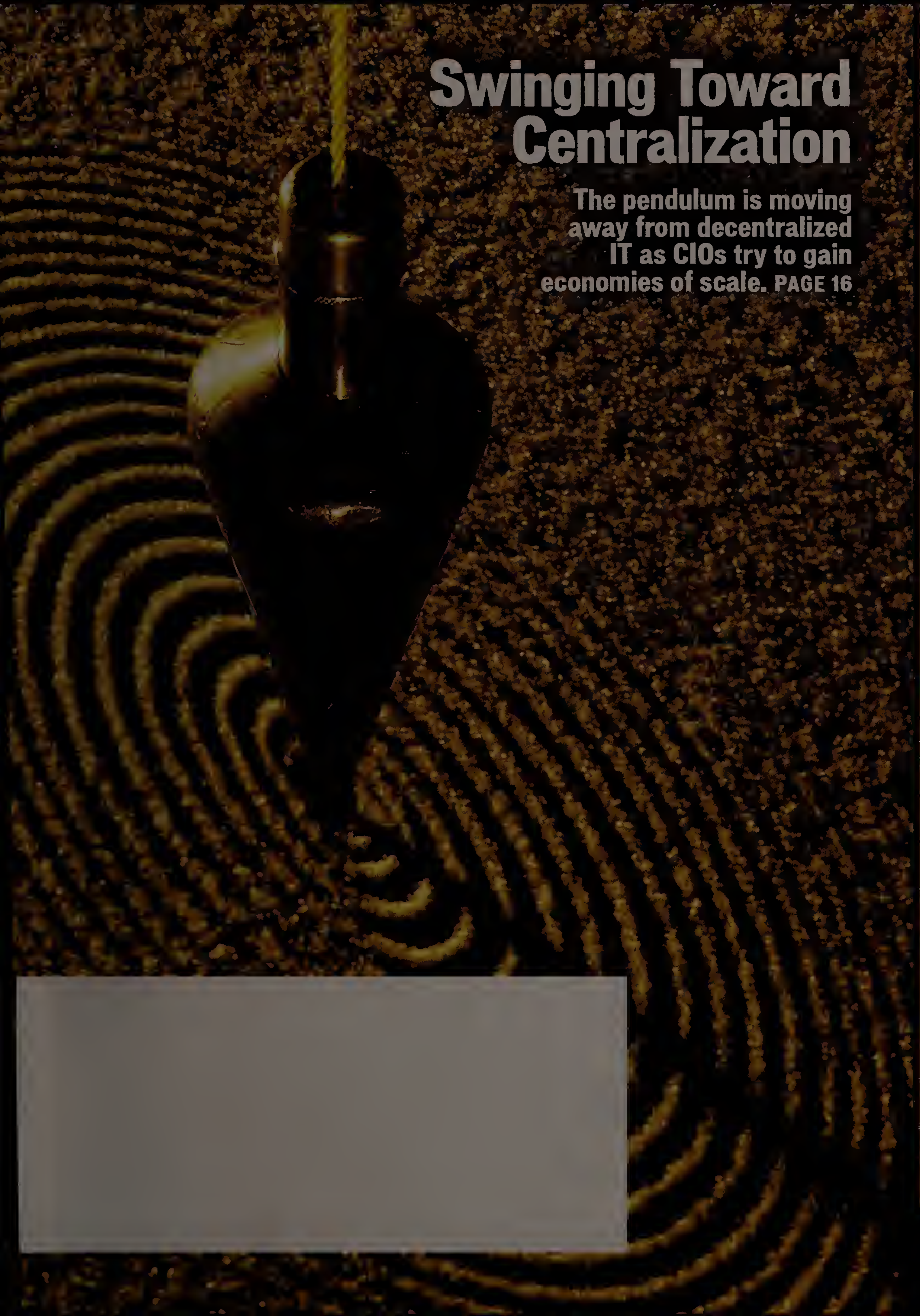
SOA Grows Up – and Out: No longer just about integration, SOA is spreading throughout the enterprise to modernize business processes. PAGE 26

COMPUTERWORLD®

Peer Perspective. IT Leadership. Business Results.

MARCH 8, 2010 | VOL. 44, NO. 5 $5/COPY



Swinging Toward Centralization

The pendulum is moving away from decentralized IT as CIOs try to gain economies of scale. PAGE 16

Inside

News Analysis

Providers face as-yet-unknown rules in a race to meet e-health records deadlines. PAGE 8

The Google-Microsoft battle heats up amid a European antitrust probe. PAGE 10

THE GRILL: A solar energy pioneer sees a bright future for the technology in data centers and beyond. PAGE 12

Outsourcing

How to manage the vendor relationship after the contract is signed. PAGE 22

Opinion

Mobile is no longer the future; its time is now, Scot Finnie contends. PAGE 21

Careers

Conventional job-hunting techniques aren't enough for tech workers. So, what does it take? PAGE 32

COMPUTERWORLD.COM

Smarter technology for a Smarter Planet:

Thinking outside the box depends on what's in the box.

The systemic inefficiencies in many server rooms today, in terms of both energy consumption and utilization, are becoming unsustainable. It isn't simply a question of cost — it's also about maintaining day-to-day operations. A recent study found that an estimated half of all businesses experience IT outages due to power and cooling issues.[1]

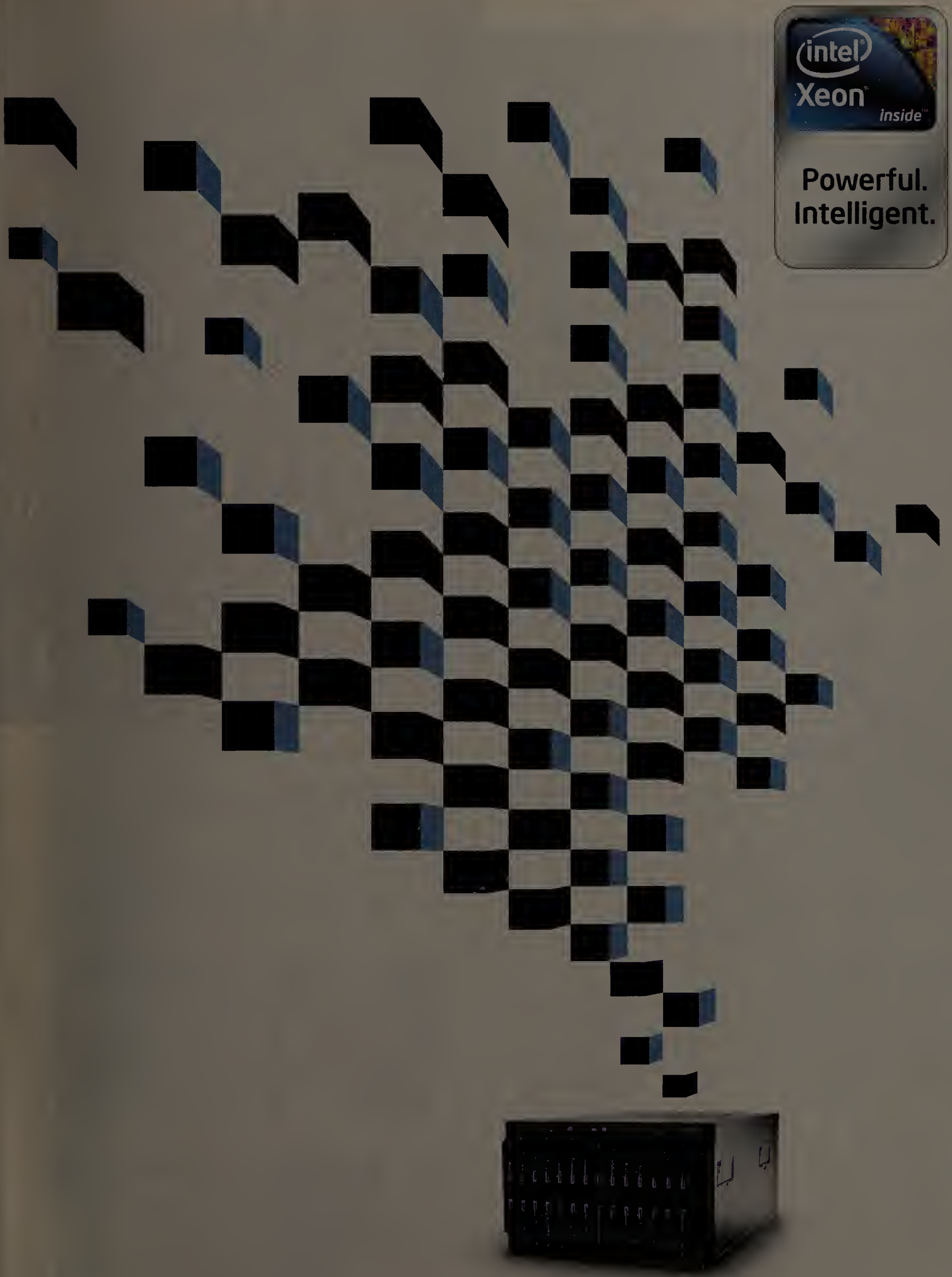
As we build out the infrastructure of a smarter planet, companies need to consider not only how much power is under the hood of their next server purchase, but also how much energy will be consumed to provide that power. That's where smarter tools like the IBM BladeCenter® HS22 come in. It's designed to give you greater efficiency at every level, from its highly efficient design and Intel® Xeon® Processor 5500 Series to its advanced management software like IBM Systems Director that actively monitors and limits power consumption. All of which can add up to 93% in energy savings over the previous generation of rack servers.

Learn how you can see a return on your investment in as little as three months[2] at ibm.com/hs22

Systems, software and services for a smarter planet.

---

[1] Source: IDC Market Analysis #215870, Volume 1, December 2008, Worldwide Server Energy Expense 2008–2012 Forecast. [2] Return on investment and power savings calculation based on 11:1 consolidation customer configurations and environment. For more information, visit www.ibm.com/smarterplanet/claims. IBM, the IBM logo, ibm.com, BladeCenter, Smarter Planet and the planet icon are trademarks of at www.ibm.com/legal/copytrade.shtml. Intel, the Intel logo, Xeon and Xeon Inside are trademarks or registered trademarks of Intel Corporation in the United States and other countries. © Internationa



ratio scenario of 166 Intel 1U 2 socket servers to 14 BladeCenter HS22 servers and savings in energy costs, software license fees and other operating costs. Actual costs and savings will vary depending on individual
International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web
Business Machines Corporation 2009. All rights reserved.

Inside

COMPUTERWORLD ■ MARCH 8, 2010

■ HEADS UP

5 Enterprises must demand **more secure code development practices** from software vendors, experts say. | Office workers still **choose paper** over electronic documents for **archiving.**

6 IBM foresees **sensors** being deployed beyond the data center to **monitor energy use.** | A panel advises the **U.S. Census Bureau** to consider **online data collection** for the 2020 population count.

■ NEWS

8 IT Scurries to Meet E-health Records Deadline. Medical practices looking to roll out electronic health record systems must meet as-yet-unestablished requirements within two years to be eligible for top federal reimbursement rates.

10 Antitrust Probe Fires Up Google-Microsoft Spat. The European Commission has launched a case against Google based on complaints from two firms connected to Microsoft, in the latest battle between the two technology titans.

■ OPINIONS

21 Scot Finnie says mobile is no longer the future; its time is now.

31 Bart Perkins believes certifications are all but essential for those who want the best jobs in IT.

36 Thornton A. May takes the contrarian view that we aren't paying our vendors enough.

■ DEPARTMENTS

12 The Grill: Solar energy pioneer **Richard Swanson** predicts a bright future for electricity generated by the sun, with more homes and businesses installing photovoltaic panels as the price of the technology falls.

30 Security Manager's Journal: Just Watching Is No Longer Enough. It may be time to supplement monitoring the network with endpoint security.

32 Career Watch: Author Andy Lester explains what's wrong with the way most of us look for a job.

35 Shark Tank: When the company president wants IT to pull back an e-mail he sent a couple of weeks earlier, he won't accept "That's impossible" as an answer.

■ ALSO IN THIS ISSUE

Reader Feedback	**4**
Company Index	**35**

DON FARRALL

■ FEATURES

16 Swinging Toward Centralization

Over the years, the pendulum has swung between centralized and decentralized IT operations. Right now, there's evidence of a shift toward centralization and its efficiencies of scale – but it's possible to go too far.

22 After the Ink Is Dry

Many IT shops still aren't good at managing outsourcers. Here's how to build a strong relationship after the contract is signed.

26 SOA Grows Up – and Out

Broadening adoption of a service-oriented architecture requires more planning, better management tools and more effective measurement of what's working – and what's not.

WHAT'S *the* BUSINESS PROBLEM?

SOURCES

RESOURCES SPREAD THIN

the QWEST SOLUTION: How do you balance an already stretched budget with ever-growing demands on your communications system? Let Qwest help. Our bundled voice, data and network solutions can help simplify your IT operations — so you can do more with less. **Solve more problems at qwestsolutions.com.**

Qwest BUSINESS

Copyright © 2010 Qwest. All rights reserved.

COMPUTERWORLD
P.O. Box 9171
492 Old Connecticut Path
Framingham, MA 01701
(508) 879-0700
Computerworld.com

■ EDITORIAL

Editor in Chief
Scot Finnie

Executive Editors
Mitch Betts, Julia King (events)

Managing Editors
Michele Lee DeFilippo (production),
Sharon Machlis (online), Ken Mingis (news)

Director of Blogs
Joyce Carpenter

Art Director
April Montgomery

Technologies Editor
Johanna Ambrosio

Features Editors
Valerie Potter, Ellen Fanning (special reports),
Barbara Krasnoff (reviews)

News Editors
Mike Bucken, Marian Prokop

Senior Editor
Mike Barton

National Correspondents
Julia King, Robert L. Mitchell

Reporters
Sharon Gaudin, Matt Hamblen,
Gregg Keizer, Eric Lai, Lucas Mearian,
Patrick Thibodeau, Jaikumar Vijayan

Assistant Managing Editor
Bob Rawson (production)

Editorial Project Manager
Mari Keefe

Associate Editor, Community
Ken Gagné

Office Manager
Linda Gorgone

Contributing Editors
Jamie Eckle, Preston Gralla, Tracy Mayor

■ CONTACTS

Phone numbers, e-mail addresses and reporters' beats are available online at *Computerworld.com* (see Contacts link at the bottom of the home page).

Letters to the Editor
Send to letters@computerworld.com. Include an address and phone number for immediate verification. Letters will be edited for brevity and clarity.

News tips newstips@computerworld.com

Subscriptions and back issues
(888) 559-7327, cw@omeda.com

Reprints/permissions
The YGS Group, (800) 501-9571, ext. 180,
computerworld@theygsgroup.com

■ READER FEEDBACK

RESPONSES TO:

Google, Microsoft, Apple: Who Will Thrive?

Feb. 22, 2010

The company that is future-proof will do best. Apple has stayed in its realm of creating exciting devices. But it has no Web presence, and its reliance on vendors like AT&T has slowed its progress. Microsoft seems to take giant leaps forward but soon enough retraces its steps and so never achieves a steady momentum. Google, on the other hand, is expanding fast. It continues to dominate search while creating great add-ons.

Envision this: In a couple of years Google brings out its high-speed Internet home connection. Storage becomes obsolete, with everyone migrating to the cloud, where even high-end applications like video editing can be run, processed and viewed on your Chrome OS. Cellular networks become a thing of the past when enhanced derivatives of Wi-Fi replace our 3G networks, with Google able to provide a complete user experience on Android.

I'm putting my bets on Google.

■ Submitted online by: *Anonymous*

I appreciate diverse opinions, but Preston Gralla's column strains credulity. Gralla indicates that Apple is doomed to "experience a long, slow decline" after the tenure of Steve Jobs because he feels it is a company that owes its success solely to Jobs' vision and unusual talent.

That is a gross oversimplification and easily refuted by the fact that Apple thrived during Jobs' recent lengthy absence, at which time the company was in the able hands of Tim Cook. If any company is vulnerable, it is Microsoft, which is dependent on a business model that is no longer at the forefront of IT. Google has also had many missteps, and as more people become wary of privacy concerns, alternatives will undoubtedly surface that people will gradually avail themselves of (Bing, anyone?). As a longtime Apple watcher and user, I've seen many "Apple Deathwatch" scenarios come and go. Gralla's column is now among these.

■ David Toub, *M.D., MBA, medical director, Gynesonics Inc., Wyncote, Pa.*

JOIN THE CHATTER! *You, too, can comment directly on our stories, at* **computerworld.com.**

COMPUTERWORLD.COM

Find these stories at computerworld.com/more

Talk Your Way Into A Raise, Even Now

IT salaries are frozen on paper – but not in real life.
computerworld.com/s/article/9158659

Tap the Wisdom of Employees

Your people can solve problems creatively. Staff brainstorms have saved Pfizer $20 million. computerworld.com/s/article/9160118

Cloud vs. In-house: Where to Run That App?

The options include public clouds and external private clouds, among others. Here's how to choose. computerworld.com/s/article/9162542

Open-Source Hardware?

The success of open-source software raises a tantalizing question: Could the same design philosophy work for high-tech gadgets?
computerworld.com/s/article/9162898

10 Must-Read Mac Tweeters

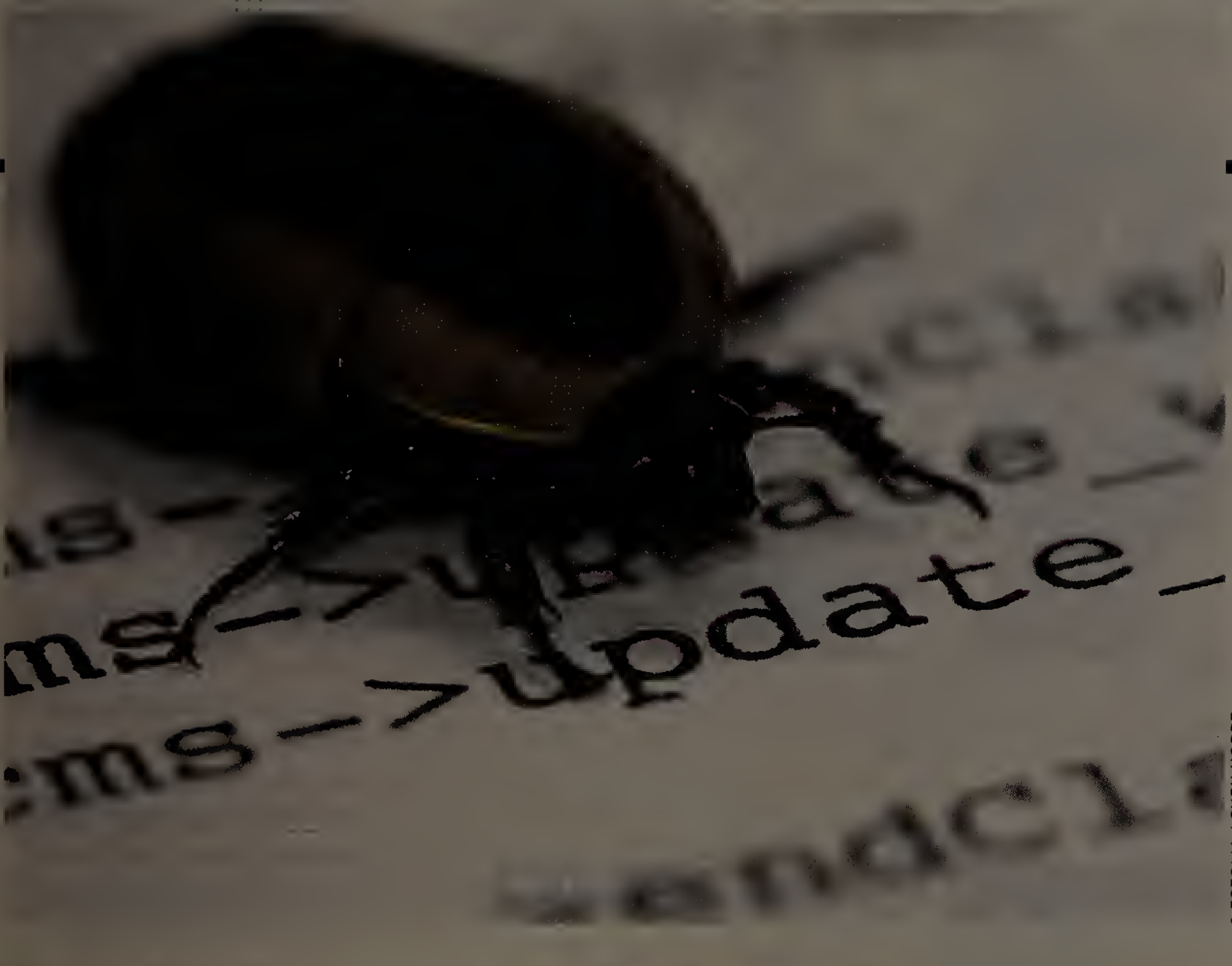
Our Mac expert names 10 sources whose Apple-related tweets he couldn't do without.
computerworld.com/s/article/9162238

Rural Broadband: Still Just a Dream

Opinion: New technologies hold promise, but rural America remains the land that telecom forgot.
computerworld.com/s/article/9160698

Fresh Insights
New Trends
Great Ideas

HeadsUp



© FOTOLIA / SVEN HOPPE

SECURITY MONITOR

Hold Vendors Liable for Buggy Software

A COALITION OF security experts from more than 30 organizations is urging enterprises to exert more pressure on software vendors to ensure that they use secure code development practices.

The group, led by the SANS Institute and Mitre Corp., offered enterprises draft contract language that would require vendors to adhere to a strict set of security standards for software development. In essence, the terms would make vendors liable for software defects that lead to security breaches.

"Nearly every attack is enabled by [programming] mistakes that provide a handhold for attackers," said Alan Paller, director of research at SANS, a security training and certification group.

"The only way programming errors can be eradicated is by making software development organizations legally liable for the errors," he said.

SANS and Mitre, a Bedford, Mass.-based government contractor, also released their second annual list of the top 25 security errors made by programmers. The authors said those errors have been at the root of almost every major type of cyberattack, including the recent hacks of Google and numerous utilities and government agencies.

According to the list, the most common mistakes continue to involve SQL injection errors, cross-site scripting flaws and buffer overflow vulnerabilities. All three have been well-known problems for years.

– Jaikumar Vijayan

COMPUTERWORLD.COM

RESEARCH RECAP

Office Staffers Won't Relinquish Their Paper Files

Office employees are loath to give up the vast amount of paper stored in their filing cabinets, much to the chagrin of companies that sell scanners and electronic document management systems.

A recent survey by AIIM, an industry association representing vendors of such products, found that 62% of important documents are still archived in paper form. Even when documents are sent off to be scanned for archiving, 25% are photocopied beforehand "just in case," the survey found.

"We are at last in a situation where electronic archiving of records is efficient, effective and can save huge amounts of space, and yet most office staff seem to be hanging on to paper in the mistaken view that there is some legal reason to do so," said AIIM President John Mancini, in a statement.

"Despite the fact that the legal admissibility of scanned paper documents has been established for nearly 20 years and is nailed down in legislation and standards around the world, there is still this suspicion among users that they may need to produce the original paper copy at some stage," Mancini said.

The survey also found that many documents are "born digital," then printed out to be signed and later scanned into document systems.

- MITCH BETTS

BETWEEN THE LINES

By John Klossner

www.jklossner.com
YOU'RE GONNA LOVE EUROPE! WE HAVE LOTS OF FRIENDS THERE - WHY DON'T YOU LOOK THEM UP? FEEL F TO CALL US IF YOU NE
GATE
slap!
M'soft
ANTI
trust
Mono
Google
investigate me
ANTI TRUST
MONOPOLY
©C'WORLD Klossner

SMART MONITORING

IBM Foresees Expanding Use of Sensors

IBM PLANS to expand into a new line of business that may ultimately incorporate futuristic technologies, such as paint infused with nano-size sensors, for managing energy use in buildings and even whole cities.

Sensors are already widely used to monitor environmental conditions and to pinpoint problems in server racks and data centers. But IBM's plan calls for extending the use of sensor technologies outside the data center.

IBM foresees wide adoption of sensor technology that could cover an office complex or a city like a blanket. The sensors could gather information about the health of physical systems, discovering leaks in pipes, for instance, by detecting changes in the environment nearby. Sensors in manhole covers could be used to monitor storm water flows.

As sensors improve, particularly through the use of nanotechnologies that will make it possible to set up networks of microscopic sensors, their usage will spread, company officials predicted.

IBM also envisions centralized management systems, via its Tivoli software, that will gather sensor data, analyze it and develop proactive alerts that warn of pending issues — or, as Al Zollar, IBM's general manager for Tivoli software, put it, "fix things before they break."

IBM said that it plans to collaborate with companies that make infrastructure systems, such as Johnson Controls Inc., a major designer and supplier of building controls and heating, ventilating and air conditioning equipment.

The technology may also drive closer working relationships between IT and facilities managers if environmental systems in data centers and office buildings are monitored in one system, IBM said.

IBM outlined its plans last month at a conference in Las Vegas, where former Vice President Al Gore endorsed the use of smart monitoring and better information to boost energy efficiency.

– Patrick Thibodeau

Micro Burst

Stricter management of employees' use of wireless services can save companies up to

35%

of their wireless costs.

[illegible] GARTNER INC. [illegible]

FUTURE WATCH

Panel Urges Modernizing '20 Census

The U.S. Census Bureau needs to consider a major overhaul of how it will count the population 10 years from now, perhaps replacing mailed-in forms with Internet forms, the National Research Council reported last month.

The Census Bureau – now working on the 2010 decennial census – is still using the same techniques it used in 1970: mailed-in forms and follow-up enumeration using pencil and paper. The bureau had to ditch an ill-fated effort to use handheld computers for this year's census.

The report urged the Census Bureau to consider using the Internet and automated telephone systems for data collection, as well as handheld computers for follow-ups. Ten years from now people may disregard postal mail as an anachronism, the report noted, and the postal system is in financial trouble.

The report added that the Census Bureau could also use the administrative data that other government agencies already have about U.S. residents.

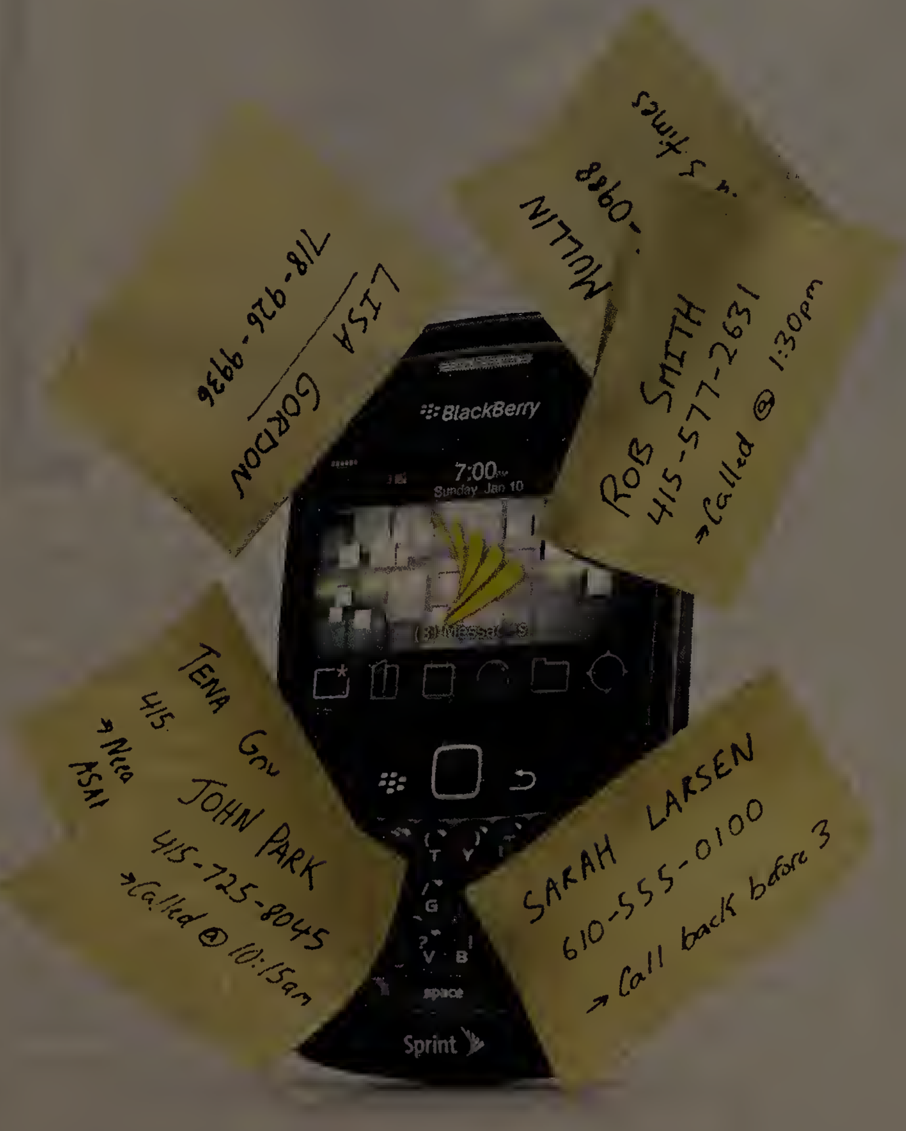
– MITCH BETTS

While you were out...

If you miss a call, you miss an opportunity. With Sprint Mobile Integration and Global MPLS, you'll have one number, one voicemail and one easy way to control mobile usage. Simplify the way your company stays in touch. Make it easier for clients to reach you. And reduce company telecom expenses. Less dialing, happier clients. Start closing. 1-866-653-1056 sprint.com/convergence

Sprint

The Now Network™



PilotHouse Award

IT professionals name Sprint best provider of MPLS—delivering best value, customer service, technology and network reliability.

Coverage not available everywhere. The 3G Sprint Mobile Broadband Network (including data roaming) reaches over 269 million people. The Nationwide Sprint and Nextel National Networks reach over 275 and 274 million people, respectively. Other restrictions apply. See store or sprint.com for details. ©2010 Sprint. Sprint and the logo are trademarks of Sprint. Other marks are the property of their respective owners.

FOCUS on driving

IT Scurries to Meet E-health Records Deadline

Health care providers must start EHR projects before the feds finish writing the rules. **By Lucas Mearian**

© FOTOLIA / YANIK CHAUVIN

U.S. HOSPITALS and physicians have four years to deploy comprehensive electronic health records (EHR) systems if they hope to snag some of the billions of dollars the federal government has earmarked to reimburse them for the work.

However, although health care companies must begin such efforts soon if they want to meet the reimbursement deadlines, the federal government has yet to finalize technology and product specifications for e-health systems, causing concern among health care IT officials.

"I think we have nontechnology people making decisions about technology," said Gregg Veltri, CIO at the Denver Health and Hospital Authority.

"The issue is the timelines. I wonder if anybody understands the reality of IT systems and how complex they are, especially when they're integrated together. You're going to sacrifice quality if you [rush rollouts]," he added.

Veltri said that rushed implementations could lead to what he called a "perfect storm" of problems with security, system integration, federal certification and clinician education.

Last year, just 10% of health care facilities in the U.S. used EHRs; by 2014, the government wants more than half of all facilities to use them.

The government is offering significant monetary incentives — a total of $36 billion in reimbursement funds — to spur EHR initiatives along. A 275-bed hospital would be eligible for about $6 million to defray IT costs, and individual physicians who implement EHR systems can get as much as $44,000.

The money is slated to become available next year to clinicians and health care facilities that prove that they're using certified EHR technology in a "meaningful" way.

The problem is that in order to finish EHR projects by 2011, work must begin now while the U.S. Department of Health and Human Services' 556-page list of specifications and criteria for what constitutes "meaningful" use of EHRs is still in the draft stage. Final rules are slated to begin coming out this spring.

The IT department at Denver Health supports 480 software applications and almost 6,000 desktop computers. "It's all integrated," Veltri said. "We have 130 integration points. All those interrelationships are what break when you go too fast on this EHR rollout.

"What we're doing is slamming systems in to meet deadlines and to get money," he said. "I think that goes against what physicians are all about. Physicians believe they're sacrificing quality to meet monetary goals that they can't pass up."

Denver Health has already installed a computerized physician order entry (CPOE) system, Veltri said.

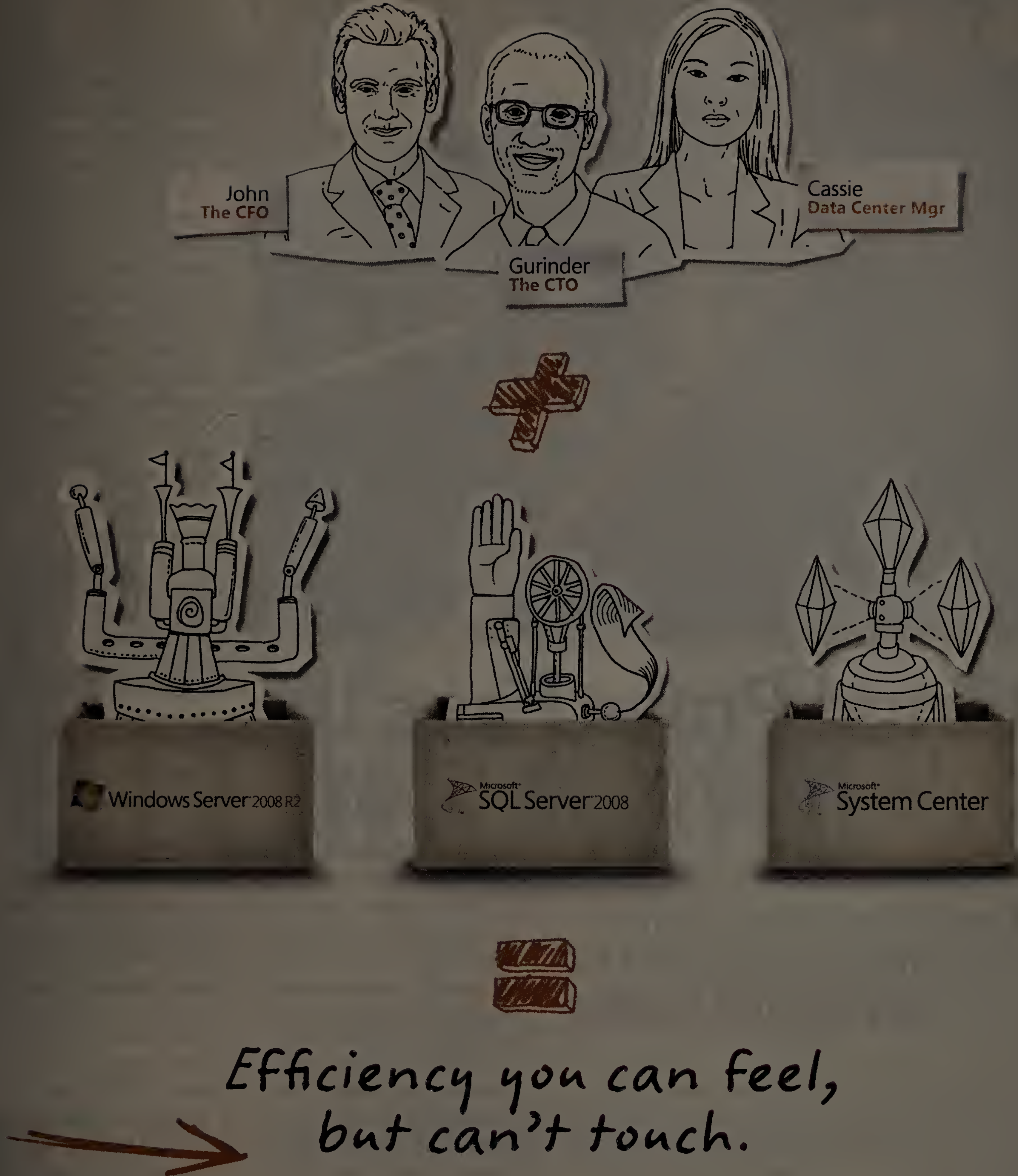
Reid Conant, chief medical information officer at Tri-City Emergency Medical Group in Oceanside, Calif., agreed that EHR systems would streamline workflow and improve the quality of care, but he noted that many hospitals lack the IT resources or expertise needed to implement them.

He suggested that hospitals start EHR projects by developing and gradually rolling out CPOE systems. "That's a highly visible microcosm," said Conant.

"It's nice seeing a nurse or physician use [such systems] and change the way we care for a patient," noted Chuck Podesta, CIO at Fletcher Allen Hospital in Burlington, Vt. ■

> **"What we're doing is slamming systems in to meet deadlines and to get money. Physicians believe they're sacrificing quality to meet monetary goals that they can't pass up.** GREGG VELTRI, CIO, DENVER HEALTH AND HOSPITAL AUTHORITY

Microsoft



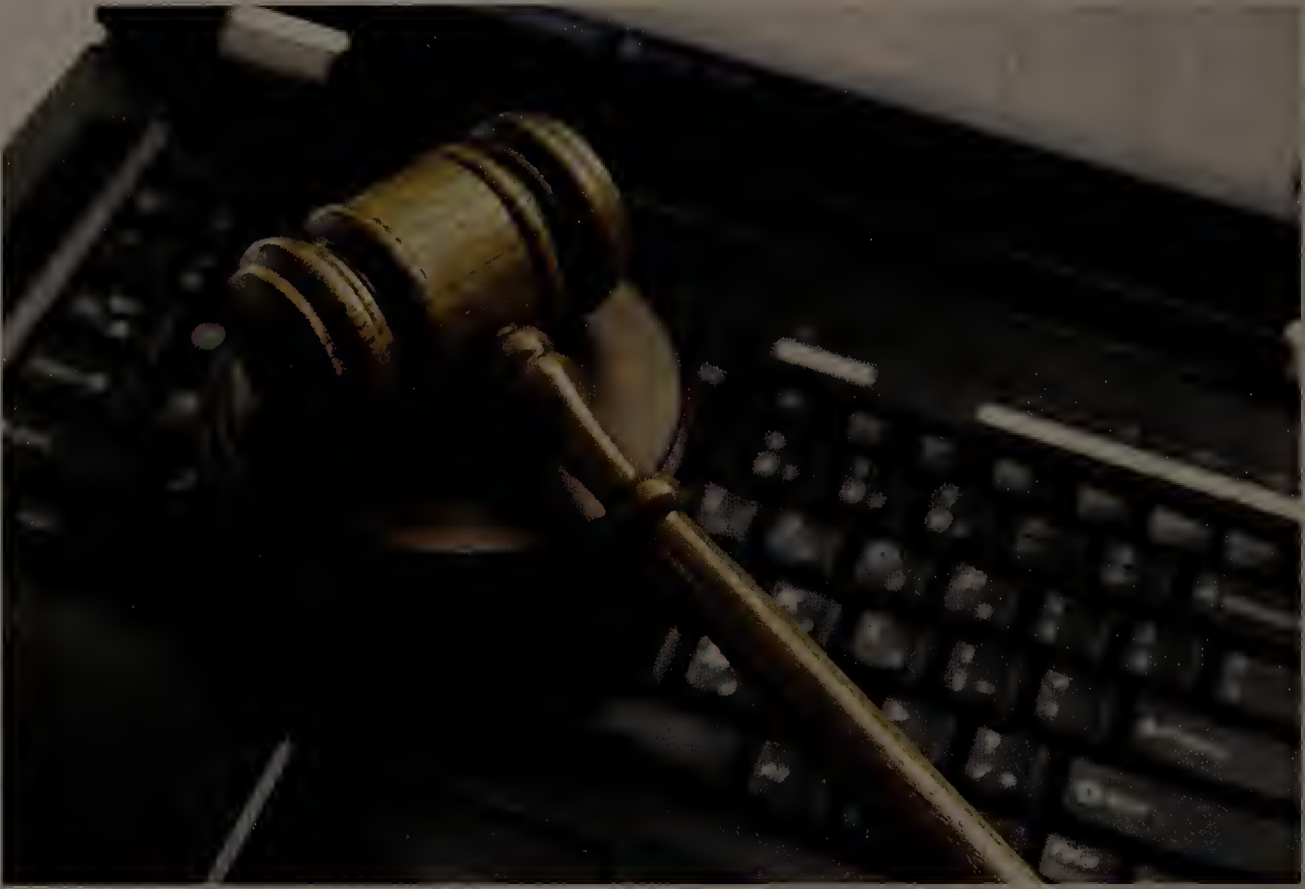
Finally, a consolidated virtualized infrastructure, from the data center to the desktop, is within grasp. Well, not literally of course. After all, it's virtualized. Start with Windows Server®2008 R2 with built-in Hyper-V™ and you can eliminate costly third-party software like VMware. Add SQL Server®2008 Enterprise, with unlimited virtualization, and you just made it easier to eliminate racks of underutilized servers. Toss in System Center and you've centralized management across the enterprise all the way down to the application level. Translation? Flexible and dynamic virtualized infrastructures that help maximize ROI, reduce TCO and improve business continuity. Just don't let the efficiency go to your head.

To learn more about how server virtualization can make you more efficient, go to **itseverybodysbusiness.com/virtual**

Snap this tag to get the
latest news on server virtualization
or text VIRTUAL to 21710

Get the free app for your phone at
http://gettag.mobi

Because it's everybody's business



© FOTOLIA / ZIMMYTWS

Antitrust Probe Fires Up Google-Microsoft Spat

The EC has launched a case based on complaints from two companies connected to Microsoft. **By Sharon Gaudin**

THE EUROPEAN Commission's decision to launch an antitrust investigation into Google Inc.'s activities has intensified that company's already heated competition with Microsoft Corp.

The EC announced late last month that it had initiated an antitrust probe into Google based on complaints from three European companies, two with connections to Microsoft.

Microsoft CEO Steve Ballmer last week acknowledged his company's role in pushing government regulators to pursue such investigations.

"We're not being silent; we're expressing some of the issues and frustrations we see. Certainly, sometimes that is unsolicited, but oftentimes, it's because we've been asked," Ballmer told an audience at the Search Marketing Expo in Santa Clara, Calif.

Microsoft's complaints to the EC are just the latest skirmish in an escalating battle between Google and Microsoft on several fronts, including the operating systems and enterprise apps markets, and the online search business in particular.

According to industry analysts, the EC investigation could slow Google's momentum by forcing its executives to shift their focus from developing new tools and moving into new markets to defending the company against the antitrust allegations.

"At the very least, this will force Google to spend time and resources complying with the investigation and mounting a legal defense," said Dan Olds, an analyst at Gabriel Consulting Group Inc.

"Google has to take this seriously, [though] at this point, we don't know whether it's going to be a mountain or a molehill," Olds added.

> **"This will force Google to spend time and resources complying with the investigation and mounting a legal defense.**
>
> **DAN OLDS,** ANALYST, GABRIEL CONSULTING GROUP INC.

Over the past year or so, Microsoft has been spending a lot of money and development resources trying to poach some of Google's 60% share of the search market.

Efforts to outdo Google in the search business "could take [Microsoft] a lot of years and a massive investment," said Rob Enderle, an analyst at Enderle Group. "The disparity in market share is simply too large for them to close the gap unless Google makes a massive sustained mistake or is hit by a successful antitrust action."

Using legal maneuvers to distract Google "potentially shortens the time and the investment needed," he added.

Julia Holtz, Google's top antitrust lawyer, questioned Microsoft's motives in seeking an antitrust probe via complaints made to the EC by Ciao GmbH, a Munich-based company acquired by Microsoft in 2008, and Foundem, a Bracknell, England-based price comparison site and a member of the iComp trade group, which is largely funded by Microsoft.

"Microsoft is our competitor, and that explains many actions," Holtz said.

Dave Heiner, vice president and deputy general counsel at Microsoft, countered in a blog post that "Google hasn't been shy about raising antitrust concerns about Microsoft in the last few years. Ultimately, what's important is not who is complaining, but whether or not the challenged practices are anticompetitive." ■

James Niccolai, Nancy Gohring *and* **Paul Meller** *of the IDG News Service contributed to this story.*

LEGACY
TO LEADERSHIP

Leave your legacy systems behind and emerge from the recession stronger than ever. Workday's software-as-a-service solutions give organizations the tools to align their workforce, improve productivity across the board, and dominate the competition. Our enterprise-class core system-of-record for HR and Payroll makes global enterprises more competitive today and better equipped to handle the inevitable changes of tomorrow.

THE BOTTOM LINE IS EVERYBODY'S BUSINESS

www.workday.com/bottomline

workday®

PHOTOS COURTESY OF SUNPOWER CORP

THE GRILL

Richard Swanson

The **solar energy pioneer** predicts that the price of **photovoltaic panels** will fall and more **homes and businesses** will use them.

Dossier

Name: Richard Swanson

Title: Founder, president and chief technical officer

Organization: SunPower Corp.

Location: San Jose

Philosophy in a nutshell: "Follow your dream."

Favorite vice: Procrastination

Dream dinner guests, living or dead: Physicist Richard Feynman, Albert Einstein, naturalist John Muir, Benjamin Franklin, Chief Joseph (of the Wallowa band), Nevada Gov. Jim Gibbons, author Tom Friedman, Jimmy Carter, Intel's Andy Grove, writer Stewart Brand and biologist Craig Venter

Favorite sport: Sailboat racing

Experts predict that in 20 years, solar power will fulfill more than 20% of the country's energy needs, up from less than 1% today. The companies leading solar technology development, such as SunPower Corp., are poised to become the new titans of Silicon Valley. Richard Swanson, SunPower's founder, president and chief technical officer, holds a Ph.D. in electrical engineering from Stanford University and has been instrumental in developing the technology. Although SunPower focuses on utility, business and residential uses, its cells were used by NASA in the first solar-powered aircraft, which reached a height of 96,863 feet.

The idea of using solar power to produce electricity in the home and having the ability to monitor and manage it, and sell the excess back to the utility, has strong appeal. Can you make a compelling case for a home solar energy retrofit? In many areas of the country, it is cash-flow-positive from Day One, basically. It represents a really great investment, whether you put the money in yourself or finance it from some of the mechanisms that are available. An average simple payback might be on the order of seven years. That sounds like a lot of time, but if you think of it in terms of interest rate, it's essentially equivalent

Continued on page 14

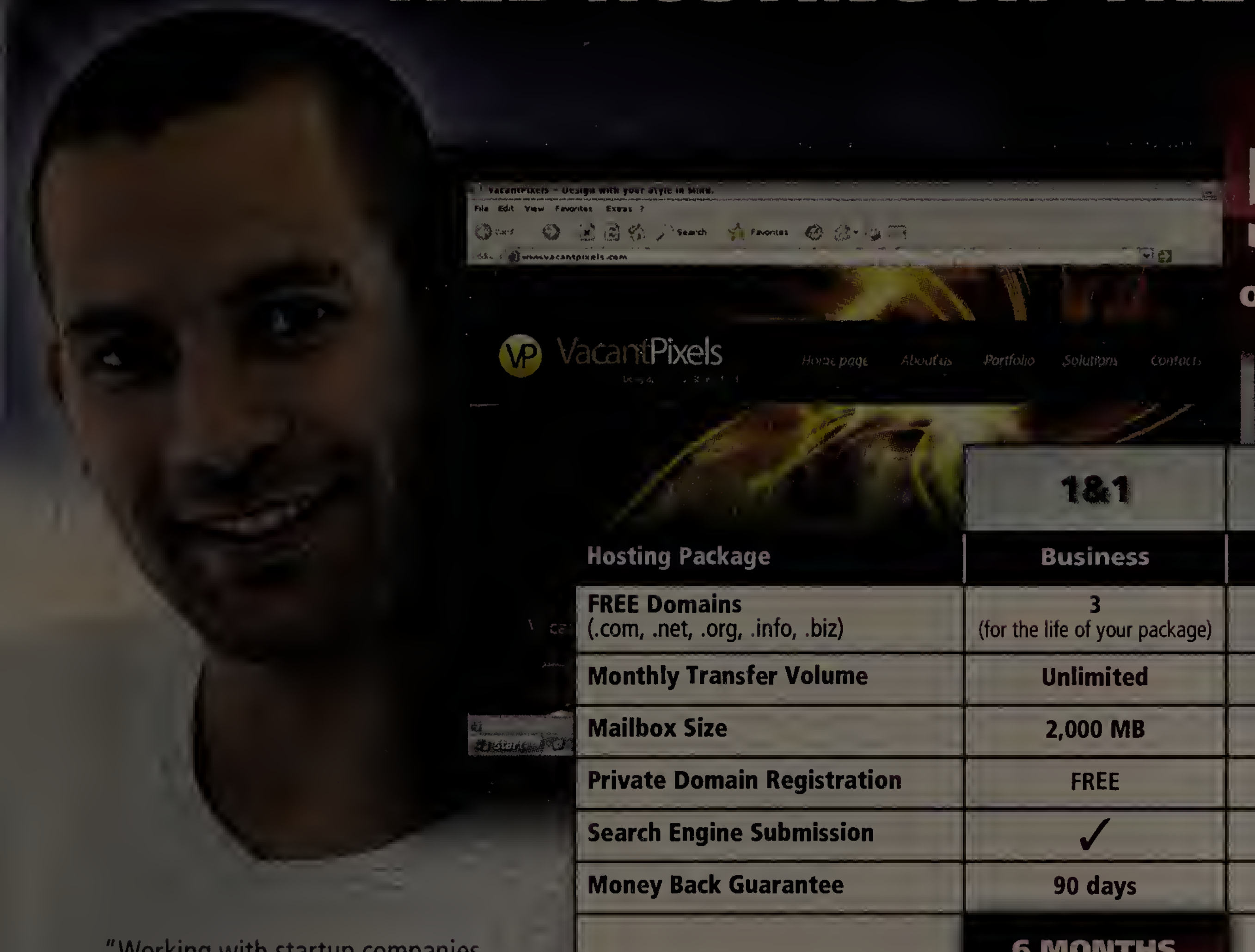
QUALITY

WEB HOSTING AT THE BEST PRICE!

6 MONTHS

50% OFF

ON THE 1&1 BUSINESS PACKAGE*



Hosting Package	1&1 Business	Network Solutions Small	Go Daddy Unlimited
FREE Domains (.com, .net, .org, .info, .biz)	3 (for the life of your package)	1 (first year only)	–
Monthly Transfer Volume	Unlimited	3,000 GB	Unlimited
Mailbox Size	2,000 MB	1,000 MB	1,000 MB
Private Domain Registration	FREE	$9.00/year	–
Search Engine Submission	✓	✓	Extra charge applies
Money Back Guarantee	90 days	30 days	–
Special Offer	6 MONTHS 50% OFF	–	–
Price Per Month	~~$9.99~~ $4.99 for 6 months*	$9.96	$14.24
First Year Hosting Total (with discount)	$89.91/year	$128.52/year	$170.88/year

"Working with startup companies on a tight budget, my clients know an online presence is needed. I use 1&1 exclusively to satisfy their requests for reliable hosting at affordable rates."

Lance Ochs, www.vacantpixels.com

As the world's largest web host, with over 20 years of experience and state-of-the-art data centers worldwide, 1&1 is dedicated to security, innovation and value when it comes to your website.

99.9% Uptime!

MONEY BACK GUARANTEE **90-Day Money Back Guarantee!**

24/7 Toll Free Support

More special offers are available online. For details, visit www.1and1.com

*Offer valid as of March 1, 2010. 12 month minimum contract term applies. Setup fee and other terms and conditions may apply. Visit www.1and1.com for full promotional offer details. Program and pricing specifications and availability subject to change without notice. 1&1 and the 1&1 logo are trademarks of 1&1 Internet AG, all other trademarks are the property of their respective owners. © 2010 1&1 Internet, Inc. All rights reserved.

1&1®

MEMBER OF united internet

Call 1-877-GO-1AND1

Visit us now www.1and1.com

> **“Today, the photovoltaic industry is using more silicon than the information communications industry. So we are driving the leading edge in terms of reducing the cost of refining silicon.**

Continued from page 12

to a 14% CD in terms of return on investment. It carries with it the knowledge that are you are helping reduce the carbon footprint.

What is the price/performance ratio of solar panels today? At the end of the day, what's important is the cost of energy being produced, and efficiency is an important contributor. If the panel is more efficient, it will occupy less land, and you will have less infrastructure to support the panels and less glass — so it's an important parameter to the calculus of this whole thing, but it's not the endpoint by any means. It's the cost of the energy. The real action is in reducing the cost of the panel, not increasing the output of the panel.

How are you reducing the cost of the panel? We are reducing at all points in the value chain, starting with the silicon. We use highly refined silicon, which is fairly expensive material. But the cost of that is coming down as the size of the silicon refining plants goes up. Today, the photovoltaic [PV] industry is using more silicon than the information communications industry. So we are driving the leading edge in terms of reducing the cost of refining silicon.

Why should data centers look at solar power in their energy planning? Certainly, renewable energy and carbon-free energy is important, and data centers could conceivably buy clean energy through power purchase agreements. You look at the most cost-effective items first to reduce energy, and that may be something as simple as switching to compact fluorescent lights. Then you could put in variable-speed AC drives into the HVAC system, and that may have a two- or three-year payback. You can put PV [cell panels] on the roof; typically, PV on a big-box retailer might save half of the energy consumed by the store.

What impact is federal stimulus spending having on clean technology? The [Obama] administration is giving a shot in the arm to people in the industry who labored for many years with a certain neglect from the federal government and a certain lack of understanding of the importance of energy. That's certainly changed.

There are a lot of new electronic devices running on very low power. Will there be a role for solar panels and solar power in these handheld devices? We continue to get requests for cells to explore applications like that. There are products on the market for recharging cell phones. Watches, very often, were solar-powered, but they got killed by the fact that lithium battery technology improved to the point that it just became easier and cheaper to put a lithium battery in the watch. The basic conundrum is the tremendous difference in the light sensitivity indoors or outdoors — about a thousandfold.

You can buy PV panels designed to run laptops, but they will only [charge] outside. I think it is an interesting area, but the killer app that really drove PV was the rooftop-grid-connected application. It made so much sense to put it on the roof of your house and generate electricity where you are using it, as opposed to some power plant hundreds of miles away.

Why work with NASA to build solar airplanes? It was very important because it gave us experience with our high-efficiency solar cell technology. It was enabling technology, and NASA was able to pay a considerable amount for it. We have a solar-powered airplane that will be flying around the world, the Solar Impulse. It was sort of what NASA had in mind — airplanes that could stay up indefinitely and monitor the atmosphere. That may come to pass.

For cars, the fact of the matter is that you cannot generate enough power from a solar panel the size of the car to power the car. You can augment. It's more likely that what we will see is solar-power charging stations. We are seeing things like parking lots that are covered with solar panels that have a twofold function. They provide electricity for charging batteries for plug-in hybrids or electric vehicles. But they also shade the parking lot and help keep the cars cool.

Where will solar power usage be in 10 or 20 years? The solar power industry has been growing at a 40% compound annual growth rate, and we don't see it stopping. In the last 20 years, we grew two-hundred-fold in terms of total production volume of solar. As an industry, we are looking to 20% to 30% of the energy in 20 years coming from solar, and by 2040 to 2050, having that go into the 40-plus percent range.

— *Interview by* **Patrick Thibodeau**

COMPUTERWORLD
SAASCON 2010

April 6-7, 2010
Santa Clara Convention Center
Santa Clara, California

Complimentary offer* to attend the industry's leading SaaS event!

Optimizing Business Opportunities While Mitigating Your Risk

Attend SaaScon 2010 and you'll hear how world-class IT executives are successfully applying pay-as-you go services, and you'll network with peers who have advice on how to transition to these new, flexible and money-saving solutions.

LEARN ABOUT:

- **SaaS IT Management Applications** – Remote Access, Monitoring, Security, Storage
- **SaaS Business Applications** – CRM, HRMS, ERP, Financial Systems Management, Supply Chain, Procurement
- **Infrastructure-as-a-Service** – Hosting, Virtualization, Servers, Storage
- **Platform-as-a-Service** – Development Environments
- **Managing Risks** – Legal, Operational, Security, Integration

www.saascon.com

To see if you qualify for a free registration call 508-988-6829 and reference priority code: AD2

* Complimentary offer valid for qualifying attendees

SWINGING TOWARD Centralization

The pendulum is moving toward IT consolidation as CIOs try to save money and gain efficiencies. But it's possible to go too far. **BY MARY BRANDEL**

WHEN THE ECONOMY plummeted at the end of 2008, the Western U.S. branch of The Salvation Army was ahead of the cost-cutting game. CIO Clarence White had centralized the IT organization a year or two earlier, and he had consolidated the database and storage servers from the business units into a single data center in Long Beach, Calif.

The move wasn't aimed at cutting costs, but "the timing was good," White says. It reduced the charitable organization's technology footprint, encouraged more virtualization and lowered maintenance and power costs. "It was an unanticipated benefit," he says. "We looked like geniuses."

COVER STORY

And White says that for the first time he feels that the organization has a strong disaster recovery strategy, thanks to consolidated storage and a fully replicated set of servers in a remote data center in Phoenix.

For decades, the pendulum has swung between centralized IT organizations and decentralized operations featuring small IT groups in each business unit. But with the urgent need to cut costs today, there's a good argument to be made for the former arrangement. With technology assets in one place, it's easier to take advantage of developments such as virtualization, storage de-duplication, cloud computing and outsourcing, all of which promise to lower costs.

Centralization also makes it easier to create an effective disaster recovery strategy, minimize labor redundancies, get volume discounts on technology purchases, and lower maintenance and training costs through standardization, proponents say.

There's some statistical evidence of a tilt toward IT centralization. In *Computerworld*'s recent Forecast survey, 37% of 312 respondents said it's likely that their IT units will become more centralized in the next 12 months (see chart on page 18). And in a 2009 IBM survey of 2,500 CIOs worldwide, 76% of respondents said they anticipated having a strongly centralized infrastructure in five years.

Under a more powerful corporate CIO, IBM itself last year completed a shift to centralized IT management, reducing the number of data centers it operates from 155 to five and trimming its portfolio of applications from 15,000 to 4,500 — so far.

THE ORG CHART ISN'T THE Cure-all

IN THE MID-1990s, pundits favored a hybrid IT organizational structure, with a central, shared-services unit to handle IT supply, plus a distributed network of people at the business units to manage IT demand.

But a 2008 study by consulting firm Booz & Co. concluded that the hybrid model has produced "somewhat disappointing" results.

The consulting firm's survey of 1,500 IT executives and their internal business customers found that the IT organizations perceived as most effective were centralized operations. For example, centralized IT organizations are better at quickly turning executive decisions into action and are more likely to be aligned with business strategy, the study said.

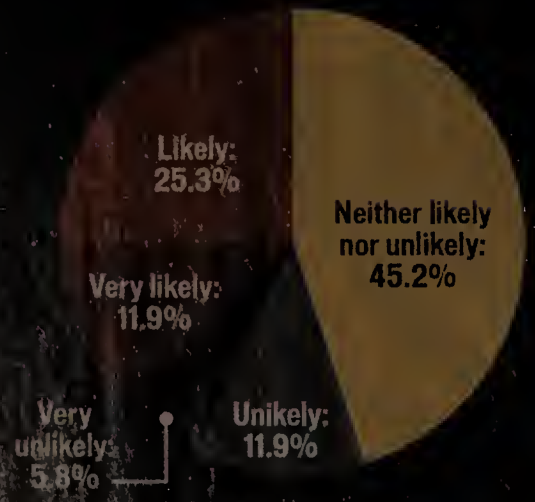
That sounds like a victory for centralization, but the Booz study found that juggling the organizational chart isn't really the key to greater IT effectiveness. Even more important factors, the study reported, are "decision rights" (how technology investment decisions are made) and "information flows" (how IT communicates with the business).

In addition, the Booz survey found that the most effective IT organizations have CIOs who report directly to the CEO, and CIOs who have an innovative or entrepreneurial approach.

– MITCH BETTS

MOVING TO THE CENTER

In the next year, will your IT department be more centralized?



Base: 312 IT managers
percentages do not total 100 due to rounding

SOURCE: COMPUTERWORLD SURVEY, [illegible]

IT management consultant Harwell Thrasher says he hasn't seen direct evidence of more companies centralizing their IT organizations, but in this economy he can easily imagine why they might. The three reasons to centralize, he says, are to lower costs, improve efficiency and gain better control over operations.

With technologies such as virtualization and remote management making centralized infrastructures more economical, companies that at one time deferred to decentralized IT groups may now say, "We're in so much trouble economically that we're going to have to centralize even though it may hurt you," Thrasher contends.

"IT centralization works best when each aspect of IT is considered separately," he wrote on his blog, "Making IT Clear," back in 2008. He suggested that it's best to centralize functions such as help desks, contracts, high-volume and high-dollar purchasing, standards, disaster recovery planning, data warehousing, and development and support of corporatewide systems such as e-mail and Web servers.

Scottrade Inc. is a good example of a decentralized business supported by a centralized IT organization. The online broker has more than 430 branches throughout the U.S., but the infrastructure to enable online trading and customer support is in a data center in St. Louis, with a disaster recovery center in Scottsdale, Ariz. Front-line support is provided by brokers in the branches, but all other calls are handled by a centralized tech support group.

The centralized model makes it easier to maintain the systems and keep them up and running, says CIO Ian Patterson. This is crucial for a brokerage — it can't have downtime when the markets are open, he says.

THE OTHER SIDE

But centralization has its drawbacks, such as possible decreases in innovation and responsiveness to the needs of business units. In report last year, Mark McDonald, an analyst at Gartner Inc., recommended that CIOs consider a hybrid approach that combines the benefits of each model and manages the weaknesses. "CIOs do not have to choose one extreme or the other," he wrote.

For the hybrid model, McDonald conjures the image of a dinner fork, with business-facing IT resources as the tines, and centralized IT services as the base and handle. The goal is to be responsive to business needs while preserving economies of scale.

Indeed, certain functions are better left decentralized, Thrasher says, citing applications that are unique to a particular location, as well as business intelligence activity, even if it pulls from a centralized data warehouse.

A common mistake, he adds, is to pull all the IT people out of the distributed locations and assemble them in one place. "You need to have somebody out there who's actually having lunch with people, talking to them on a day-to-day basis and keeping the relationship managed," he says.

That's a mistake White avoided. The motivation behind his centralization effort at The Salvation Army was to get rid of the "little IT departments" in the business units and transform the formerly generalist IT directors into specialists in particular technologies.

Before, White says, he had dotted-line authority over those directors, whose technology knowledge was more broad than deep, and there was rampant duplication of services. As technology grew in complexity, he says, it was impossible for the directors to know enough about every system to properly strategize. "As an organization, we couldn't leverage their strength and share technologies adequately across the business," he says.

White reorganized the existing staff into a consolidated IT department by assigning a technology specialty to each of the directors, who remained in the business units. Assignments were made based on the directors' areas of interest. One of their jobs as specialists, he explains, is to provide support if they're the closest resource to the problem.

White describes the reorganization as an "astonishing" success, but he acknowledges that the transition had its rough spots. "There was a lot of opposition that had to be worn down over time. People like having their own IT guys, and they don't always trust I'll have their best interests at heart," he says.

Tension and conflict are inevitable when you're balancing the interests

Continued on page 20

Manage the Future

Desktop to Cloud

Las Vegas, Nevada | April 19–23
The Venetian Hotel

Microsoft Management Summit 2010

The annual Microsoft Management Summit (MMS) is the premier event of the year for deep technical content on the latest IT Management solutions from Microsoft, Partner and Industry Experts.

This year's theme, Manage the Future, reflects the ever changing scope of IT management and the need to manage everything from device to desktop and datacenter to cloud. As initiatives such as Virtualization and Cloud Computing become widely deployed, IT Management will play an increasingly key role in reducing apparent complexity while maximizing flexibility, availability and performance.

With over 140 demo-packed technical sessions and thousands of Hands-on Lab places, MMS 2010 offers deep coverage of the latest products and solutions you'll need to "Manage the Future".

Register today at: www.mms-2010.com

Microsoft System Center

Microsoft

Continued on page 18

of the business units with the broader needs of the organization, White adds. The key is developing trust over time by communicating and delivering on promises. "We publish a road map of what we intend to do and communicate what we've done, while also providing them an opportunity to tell us what they want us to do," he says. "As soon as you do some impressive things, people buy into it more."

CONSTANT UPKEEP

Mike Twohig, CIO at Clean Harbors Inc., an environmental services company in Norwell, Mass., is a true believer in centralization, but he says it requires constant vigilance to make sure the field locations get the service they deserve.

At Clean Harbors, a central IT group develops, maintains, supports and runs a Web-based application infrastructure for the company's 175 locations worldwide. The IT staff is based at headquarters, save for six or seven PC technicians who work in the larger field offices primarily to ensure coverage across different time zones. IT uses remote access technology to perform phone, network, PC and help desk support.

The setup has many benefits, says Twohig. For one, it makes it easier to integrate newly acquired companies. Clean Harbors' last acquisition was a $500 million company with 4,000 users in 50 locations, and everyone was up and running within 24 hours. "You couldn't do that without a centralized model," he says. "We put them on a Web browser and managed everything from here."

In addition, it allows IT staff and management to quickly assess problems and find solutions. With all the data and most of the staff in one place, "we can quickly interact with a variety of people and data in a minute's notice," Twohig says.

> **There was a lot of opposition that had to be worn down over time.**
>
> **CLARENCE WHITE**, CIO, SALVATION ARMY, WESTERN U.S. BRANCH

Costs are definitely lower with a centralized model, he notes. Through virtualization efforts in the past five years, the need for additional servers has been completely eliminated, he says. Disaster recovery costs less, as does regulatory compliance. These savings more than offset the increase in bandwidth and infrastructure spending.

Twohig acknowledges that he revisits the centralized approach from time to time, especially as the company grows. "There are valid arguments for where centralization can hurt you," he notes. For example, a centralized operation can't take advantage of lower-cost geographic areas or low-cost labor markets.

But he counters that there are plenty of savings to be had in reducing travel, securing and maintaining just one data center, simplifying procurement, having fewer shipping locations and reducing redundant staff positions, processes and systems.

Like White, Twohig does get pushback from the field, which, he says, is never 100% comfortable with the centralized model. "There are people who still say, 'What's the ivory tower going to do next?' " he adds. To offset the isolation and frustration that business users may experience, Twohig encourages staffers to use the phone or instant messaging rather than e-mail. He has also enabled instant Web meetings, integrated with Microsoft Outlook. To stay on top of business requirements, project managers are linked with business people throughout the organization to get feedback on their technology needs.

There are still some outliers that Twohig wants to rein in. Clean Harbors still has three payroll companies, in the U.S., Canada and the U.K. And it has two groups that manage cell phones. In both cases, he's looking to consolidate. "When you start down this path, you have to pursue it with hunger," he says.

Twohig says he regularly reassesses IT processes, policies and service quality to make sure they're appropriate for the entire organization, including remote offices. The key, he says, is two-way communication between central IT and local managers, including frequent checks to see whether an IT policy or service still makes sense. "What is good today may not work a year from now when processes change or volume is added, or users in the field turn over and need to be trained."

Is centralization for everyone? According to Twohig, the answer is yes. "I would argue that it should be a goal," he says. "But it requires deliberate action, from the top down." ■

Brandel *is a* Computerworld *contributing writer. You can contact her at marybrandel@verizon.net.*

LOSING CONTROL TO OUTSIDE Forces

THE PENDULUM of IT organizational structure has swung wildly over the years, from the totally centralized "glass house" of data processing departments to the decentralized networks of highly responsive IT managers within business units. Sometimes the pendulum stopped in the middle, such as when central technology czars imposed IT standards on the business units in order to reassert some control.

With the economic meltdown in 2008 and 2009, the pendulum "swung all the way back to total budget lockdown, where governance was centralized," says Stephen Andriole, an IT consultant and fellow at Cutter Consortium, in a recent blog post.

But there are new forces in play that will stop the pendulum from swinging, Andriole says, leaving both the corporate IT professionals and the business units with less control.

"So, what exactly happened? Technology commoditized, consumerized – and left the building," he says. Commoditization has pushed IT prices down, while technology innovation is coming from the worlds of consumer electronics and social media – outside the corporate walls. Gen X and Gen Y workers may be getting their technology from the local Apple store. "Consumerization spreads control to everyone," Andriole says.

– MITCH BETTS

■ **OPINION**

Scot Finnie

Time to Get Smart About Smartphones

IF YOU DIDN'T GET THE MESSAGE with the release of the iPhone or the subsequent arrival of Android, then Windows Phone 7 has to be your wake-up call. Mobile is no longer just the future; its time is now.

Smartphone technology is accelerating the consumerization of IT and transforming personal and business life, blending one into the other. The recession has done nothing to slow that trend; if anything, it has spurred it on. Employees who survived layoffs were left worrying about their own continued employment even as they coped with increased workloads. Needing to stretch the business day to stay on top of things and demonstrate their commitment to the job, people turned to a tool that lets them read that urgent e-mail, text that much-needed answer or grab that important phone call late into the evening. You can't take a notebook PC to the opera or to your kid's soccer game. But you can take a smartphone and stay connected — and employed. And when you're spending more and more time on the job, a smartphone becomes a handy way to keep up with your personal life.

IDC predicts 20.9% growth in smartphone sales from 2009 through 2013. Symbian and Research In Motion remain the market leaders, but competition is sure to intensify now that three of the most important end-user tech companies — Microsoft, Google and Apple — have entered the market. That's a beautiful thing.

After all, we're starting from a low point. Today's smartphone is seriously wanting. Virtual keyboards are barely passable. Data transfer rates are pathetic (in the U.S., at least). Call quality is still only marginal. The smartphone is a jack of all trades and a master of none. There's clearly room for improvement, which explains why there's so much pent-up demand for a better user experience. Some people fall in love for six months at a time with models that offer only minor functionality gains over their predecessors — and then they go looking for the next incremental upgrade. That's a sign of an immature product technology serving an engaged, demanding customer base.

■ **Clamping down on smartphones is not the way to go.**

For IT managers, such rapid change in a class of devices about which people have strong personal preferences can be a nightmare. At my company, a recent iPhone operating system upgrade killed the account-authentication process for corporate e-mail. Unable to access their e-mail, many iPhone users went out and purchased BlackBerries because they didn't have time to wait for the fix.

How do you support this huge shift to smartphones and the accompanying rapid churn of models and platforms? How do you secure the connections to corporate servers? How do you protect the devices themselves? How do you safeguard your company from apps? What is going to happen when, inevitably, mobile operating systems start being targeted in earnest by the bad guys? What about the mixture of company-owned and personal devices?

When PCs were becoming serious business tools, IT managers let pundits, analysts and the media steer the conversation. This time, IT needs a seat at the table. Companies like RIM and Microsoft know how to play that game. But Apple and Google may not make IT issues a priority. It's up to IT to make sure they see the importance of it.

IT shops that start working out solutions to mobile problems will avoid the pitfalls. Clamping down on smartphones is not the way to go. You're not likely to thwart the will of your entire user base. Embrace the inevitable, but institute policies and processes that protect your enterprise. Becoming informed about how devices are being used is probably Step 1.

I'm interested in how different IT shops are handling this issue, so please drop me an e-mail and let me know how it's done at your company. ■

Scot Finnie *is Computerworld's editor in chief. You can catch him on Twitter, where he tweets as @scotfinnie, or you can e-mail him at sfinnie@computerworld.com.*

© FOTOLIA / YURI ARCURS

After the Ink is Dry

Many IT shops still aren't good at managing outsourcers. Here's how to build a strong relationship after the contract is signed. By Mary Brandel

WHEN THE global trade association SEMI experienced a big revenue decline last year and had to cut staff, CIO Gil McInnes turned to outsourcing. He hired CenterBeam Inc. to consolidate and manage the semiconductor industry association's servers and infrastructure on a variable cost basis.

McInnes lauds San Jose-based CenterBeam's collaborative approach, and he feels the vendor has a great cultural fit with SEMI, which is also based in San Jose. The deal cut SEMI's IT budget by 8.3%.

Now comes the hard part: managing the aftermath.

McInnes says that although the shift to outsourcing is saving the organization money, SEMI paid a nonfinancial price: The remaining IT staff had to change the way it operates on a day-to-day basis. Accustomed to doing everything themselves, staffers now function at arm's length from both the physical devices and the people managing them.

"We've lost half our staff, [the remaining workers'] jobs have changed radically, and the challenges are just as big," McInnes says. Those challenges include developing metrics that accurately measure the provider's performance, even as projects evolve; refining processes in tandem with

Mind *Shift*

To improve vendor management, IT organizations need to shift from the left column to the right.

Procurement/contract management	Relationship management
Driven by purchasing/legal	Driven by affected managers
Legal protection	Relationship-building
Product/service/price	Long-term provider of solutions
Simple cost reduction	Ability to innovate
Complex scoring systems	Few critical issues
Service-level agreements	Process performance
Arm's-length relationships	Joint company-vendor teams

SOURCE: OUELLETTE & ASSOCIATES

CenterBeam; and maintaining open lines of communication at all levels.

"If you're used to managing people, and now you're managing an external supplier, it's a tremendously different skill set," says Lawrence Kane, who performs IT sourcing strategy and competitive assessment work for a Fortune 50 company.

Observers say that despite decades of outsourcing in one form or another, IT organizations still have difficulty managing relationships with vendors after the ink dries on the contract.

In a 2009 survey of 57 IT executives by the CIO Executive Board, 54% of the respondents reported challenges with managing vendors (see chart, page 25). Improving this situation is crucial, because failure to manage vendor relationships effectively can destroy up to 90% of the value expected from the contract, the CEB says.

Indeed, without a good relationship, the provider can't be relied upon to help out in times of need and to suggest innovations and process improvements, says Ken Emery, a former CIO and a senior consultant at Ouellette & Associates, which conducts workshops on vendor relationship management.

Outsourcing helped SEMI save money but created new challenges.

Managing service providers requires a different mind-set from managing an in-house team. For instance, you might be accustomed to coaching and developing in-house employees, whose objectives are typically in line with those of the business. "But you're not doing that with an outside vendor, who has their own agenda and objectives," Emery says.

As a result, IT managers working with contractors suddenly need to be involved in a whole new realm of activities, such as bridging cultural differences and monitoring contractual performance metrics. They also have to bolster their negotiating and influence skills. "You might be trying to push the provider the same way you pushed your staff," Emery says, "but they're not directly under your control, and you can't dictate to them."

Outsourcing "is one of the most powerful weapons an IT executive has, but you can really shoot yourself in the foot with it," says Nick Krym, author of the e-book *The Pragmatic Outsourcer* and chief technology officer at PDR Network LLC, a provider of print and online pharmaceutical information in Montvale, N.J. "The impact could be worth millions to your company and even the loss of your career."

With that in mind, here are nine tips for managing outsourcers.

1 CHOOSE THE PROVIDER WITH CARE

Vetting service providers will become one of IT's top responsibilities, McInnes predicts, as companies realize the importance of aligning their own visions, goals and objectives with those of the provider.

A big reason for SEMI's success with CenterBeam, he says, is the ease with which their business models meshed. For example, CenterBeam offered a flexible pricing model that will enable SEMI to add capacity as its membership grows, without having to hire additional staff; other providers could only discuss pricing based on full-time staff equivalents. "That didn't have any meaning to me," McInnes says. "It wasn't a unit of measurement I was interested in."

2 MANAGE CULTURAL DIFFERENCES

An often-overlooked area of alignment is culture, Emery says. Clashes can arise not just from, say, differences in nationality, but also from differences in company structure, such as cases where one party is entrepreneurial and the other is process-driven, or one is hierarchical and the other collaborative. Challenges can also arise when younger workers are mixed with older ones. If such differences are not dealt with, "they will cause intractable problems with the working relationship down the road," Emery warns.

3 'SOCIALIZE' THE CONTRACT TALKS

The writing of the contract is another area rife with pitfalls that can impede healthy relationships, Emery says. For instance, it's typical for contracts to be hammered out by executives in the purchasing and legal departments and then "thrown over the wall" to the managers working with the provider day-to-day. Instead, Emery

> **You're supposed to delegate work to the vendor, not abdicate all responsibility.**
>
> **NICK KRYM,** CHIEF TECHNOLOGY OFFICER, PDR NETWORK LLC

says, operational staff and process owners should be involved early on, helping to create performance metrics and statements of work that really measure what you want to accomplish.

Kane agrees that it's important to work the requirements and expectations of business users into the contract. "If all of a sudden Fred from the help desk is gone, and [employees are] given a phone number to call for tech help, people will rebel," he says. Instead, ask representatives of the affected business units what they need and how they would like to see the process work so you have their buy-in. "You need to socialize the changes," Kane adds.

Ditto for the provider's side, he says. During the RFP and negotiation processes, insist that personnel who are going to manage the project be involved, not just salespeople. "You want people managing the contract who you've gotten to know, looked in the eye and believe can do the work," Kane says.

You also need to find a balance between working within the contractual framework and getting overly legalistic, Kane contends. "You won't be successful if you pull out the contract and get out the lawyers every time you need to talk about something," he says. "If you've hired the right supplier, you can work more with the spirit of the law than the letter of the law."

4

REFINE INTERNAL PROCESSES

To ensure that a provider can work smoothly with your company, you will likely need to adjust your internal processes for incident management, change management, project management, contract management and requirements capture, says Bea Schrottner, a research director at the CEB. "This should enable you to interact with someone outside the organization that doesn't have strong knowledge of how things work in your organization," she says.

These are functions that many organizations don't outsource, Kane says. "It's common to retain a layer of integration staff for architecture, design, maybe security, contract management and relationship management," he says. There needs to be someone in-house who's intimately familiar with the contract; if providers are asked to do things they're not paid to do, or they get the customer to do work they're supposed to do, slowdowns, duplicate efforts and wasted money can result.

In some cases, it makes sense to adopt the provider's processes. That's what McInnes did for the help desk functions he outsourced to CenterBeam. "We had our own escalation processes, and there were things we monitored that CenterBeam did differently, but it worked well for them and their customers," he says. "Once we understood them better, it also worked for us."

5

END ARM'S-LENGTH RELATIONSHIPS

The old understanding of outsourcing was that you handed off work to an outside provider; the new understanding is that you're fully integrating the provider into your management processes, says Jagdish Dalal, president of JDalal Associates LLC, an IT outsourcing consultancy in Avon, Conn. "More companies recognize that they're integrating the service provider into their corporate fabric, which means it can no longer be a hands-off relationship," he says.

This is particularly true when you're expecting the provider to offer ideas for process improvements and innovations, Emery says. He suggests educating providers on corporate strategies through workshops, presentations, joint teams and face-to-face meetings. One company, he says, held a half-day presentation, where it described its short- and long-term priorities and asked providers how they could help meet those goals.

IT managers need to create an environment that encourages both the vendor and customer to suggest improvements, Emery says. "If you have a legalistic environment, you're arguing terms and conditions versus being in more of a partnership."

Relationships should be established at all levels of the organization. "The executives here have to trust the executives at the provider organization, and the guys on my team have to respect the people they're interacting with," McInnes says. "I'm in the middle, communicating up, down and horizontally."

6

BE A GOOD CUSTOMER

It may seem counterintuitive, but when negotiating agreements with the service provider, try to create terms that are favorable not only to your own company, but also to the provider, Schrottner suggests. "You don't want it to be painful for them to work with you," she says. "The easier you are to work with, the more beneficial the relationship."

For instance, she says, rather than bargaining for the absolute minimum price, she says, ensure that the provider can profit from your business within a reasonable range, and even seek opportunities to partner with it in areas where it wants to grow. "Try to find a spot where you are an interesting customer for the vendor," she says.

Kane agrees. Once a provider begins to see shrinking profit margins, the relationship can start to go south. If you sense problems, it might be time to work with the provider on establishing a win-win situation, perhaps looking for areas where it can expand its business in your company, he says.

Top 5 IT Sourcing Challenges

What are the top challenges you face when managing IT service providers?

Implementing effective vendor management:	54%
Coordinating multiple vendors:	54%
Defining a sourcing strategy:	44%
Establishing vendor selection criteria:	42%
Monitoring vendor risks:	33%

Base 57 IT executives multiple responses allowed

Krym uses metrics to ensure he's not overworking the provider's staff. "I've made the mistake of driving the vendor too hard," he explains, "and they ended up saying, 'We're losing money on you.' " He makes sure developers get training and don't stay on his projects more than a couple of years; otherwise, they get bored.

Moreover, Krym measures how many hours developers are working, keeping it to an average of 45 a week. In one case, developers were working 60 hours a week, but he was being billed for just 40. "It was driving the employees insane to keep me as a customer," he says. "It wasn't sustainable, and people started quitting."

7

DEVELOP MEANINGFUL METRICS

Metrics are fundamental to managing providers, and they should be developed at the service, operating and governance levels to measure everything from network speeds to customer satisfaction, Kane says.

But McInnes says it takes a few tries and ongoing reviews to ensure that the metrics you're using are meaningful and applicable to everyone. This is particularly true as projects move from the deployment phase to ongoing support. "We've learned you usually get them wrong to start with," he says. "Or the tech staff might be happy with them, but they don't translate up to the management level."

Another mistake is creating complex scoring mechanisms that have little connection to reality. In some cases, McInnes says, he has adopted the metrics offered by the provider, with some modifications. "It's common to want to use your own metrics, but the vendor has them for a reason."

8

TRY TWO-WAY SCORECARDS

Commonly used in procurement, scorecards are now recommended to track providers' performance by rating them on key performance indicators. Rather than using the traditional one-way ratings, however, Schrottner suggests choosing a subset of metrics and having the vendor self-report on its performance. At the review meeting, you can discuss areas where there's a large difference in perception, she says. "It guides the discussion and enables you to have a focused and productive conversation," she adds.

You can also ask the vendor to rate you as a client to determine ways you could be easier to work with in areas such as bill payment or internal processes.

9

DELEGATE, DON'T ABDICATE

Just as you wouldn't assign work to a junior employee without frequently checking in, you can't expect a service provider to operate without your involvement and control, says Krym. "You're supposed to delegate work to the vendor, not abdicate all responsibility," he says.

In fact, service providers have to be managed tightly, since problems can arise for so many reasons, including language, cultural and time differences, not to mention the fact that you often have to communicate via middlemen. "Everything that could be misunderstood will be misunderstood," Krym says.

Combine this with providers' natural inclination to make as much money off of outsourcing deals as they can, he adds, "and the only way to prevent them from doing that is controlling their behavior and verifying what you've been told."

You can't develop provider relationship management skills overnight. The Fortune 50 company where Kane works has been outsourcing IT services in a big way since 2003, "and we still find areas where we're not as good as we need to be," he says. "If you're thinking of getting into or increasing your sourcing, you've got to have a strong set of tools and processes and the right people involved, or you just can't be successful." ■

Brandel *is a* Computerworld *contributing writer. Contact her at marybrandel@verizon.net.*

SOA Grows Up — and Out

WEB SERVICES & SOA

No longer just about integration, **SOA is spreading throughout the enterprise** for business process alignment, among other things.

By John S. Webster

NOT TOO LONG AGO, IT organizations turned to service-oriented architecture primarily as a way to integrate enterprise applications. But now large companies are using SOA to create components that can be combined and reused as services across multiple applications.

Continued on page 28

© FOTOLIA / SANDRA CUNNINGHAM

Microsoft

Open to open source.

When it comes to deploying open source applications, look to Windows Server 2008 R2.

Let's face it: working with others helps everyone. As our participation with open source communities progresses, we remain focused on fostering innovation, progress, and, most importantly, business success through the universal platform of Windows Server® 2008 R2. From deploying and running open source applications to working alongside other platforms in a diverse IT environment, we're committed to making Windows Server 2008 R2 your platform of choice.

To learn more about Microsoft and open source, visit:
http://port25.technet.com

Windows Server

Continued from page 26

This makes application updates easier and faster, reduces development time, improves service to customers and partners, and saves money.

It's still SOA, just all grown up.

"You don't get high marks anymore for simply writing Web service wrappers around existing applications," says Hamesh Yadav, lead systems architect at Wells Fargo & Co. in San Francisco and co-chairman of The Open Group's service-oriented infrastructure working group. "SOA is more problem-based now."

While this broader use of SOA does lead to management challenges, including the need for "building in governance so you have a way to register and share services," Yadav says, "the end result is a reduction of complexity" by making things more interoperable.

Massachusetts Mutual Life Insurance Co.'s SOA project incorporates about 100 services, including distribution management, premium collections, customer information management, new business and underwriting.

These services integrate applications across business units, each of which markets different products. Instead of replacing an existing application wholesale, business units select an appropriate combination from the company's array of shared services, says Kinam Peter Kim, vice president of enterprise SOA strategy at the Springfield, Mass.-based insurer.

"To us, SOA is not a technology. It is an approach to modernize our business — an approach to create an adaptable enterprise," Kim explains.

Well-designed SOA services are reusable for both business process automation and systems integration. For example, MassMutual's shared business functions, such as security, are placed into repositories. These shared functions conform to the IT department's governing policies, which in turn determine which applications use the shared services.

When the company was considering revamping its SOA approach in 2007, the IT team realized that instead of changing the architecture model, it could use one model across all business units.

"We asked questions like, What does SOA mean for our business?" says Don Carten, assistant vice president of enterprise technology at MassMutual. "We thought about the approach, what funds to lay out, practices, what services do we use. Then we built a team that was core to the program and built out the services using well-known standards."

"SOA is moving into the mainstream, where it becomes a component of other things," says Mike Gilpin, an analyst at Forrester Research Inc. "Companies define Web services, write the code and then deliver the [application] service."

Gilpin uses the telecommunications industry to illustrate the concept. SOA is the lingua franca that bridges all of a telco's services — land line, Internet, mobile, television and more — so they can be delivered in a unified manner on a carrier's Web site. This setup could even be extended to the company's retail outlets, where it would enable salespeople to see details of service packages on a monitor.

Sowing SOA

On the whole, companies are expanding their use of SOA – but it's not universal happiness, according to a recent survey.

Enterprises of all sizes using or planning to use SOA: **68%**

Enterprises not planning to use SOA: **32%**

Base: 921 IT executives

Of those enterprises that are using SOA:

52% are increasing SOA use.

18% are "struggling" to get the SOA benefits they expected.

1% are cutting back on SOA.

Base: 515 IT executives

SOURCE: FORRESTER RESEARCH INC., FOURTH QUARTER 2009

With SOA, all of that could be more tightly integrated, allowing a company to market, provision and create bills for combined and bundled services from all sources.

Each of those systems could run on different underlying technologies, Gilpin explains. "Land lines might live on a mainframe, while mobile services are running on a Java platform. SOA is the enabler, and this lowers cost."

Similarly, in the financial services industry, SOA could enable banks to process loans faster or offer speedier service with fewer hassles, he adds.

At Cigna Corp., SOA evolved differently than it did at MassMutual, but it yielded similar results. The Philadelphia-based health insurer got started with SOA around 2001, jumping into the technology wholeheartedly. While many other user organizations were testing Web services at the departmental level, Cigna rolled out SOA for large-scale, companywide systems. Deployments included new call center software and a consumer accounts management application.

"We built out the existing hardware and software infrastructure, and now there are pieces of SOA in nearly every mission-critical application," says Stephen Bergeron, senior director of architecture at Cigna.

The company relies on SOA for process orchestration, data services and business services, among other things, he says. Cigna has rethought — from both a business and an IT perspective — how different business units will access and use shared applications, Bergeron explains.

Because many business applications have overlapping features, it's important to define upfront the function that each service is intended to fulfill, and to govern each one's use accordingly, Bergeron says. Doing so will ensure that technology is used appropriately. Taking that step is "especially important as SOA is adopted across the enterprise," he adds.

Today, Cigna's shared-services registry and repository promote greater data sharing. The registry contains information about which applications are integrated with the SOA, and which reusable code each uses. The repository stores the reusable code.

EXPANSION STRATEGY

The use of services for mission-critical applications represents a shift. It's different from an application made up of services, or one that uses services that are separate from the SOA, Forrester's Gilpin explains.

The use of SOA typically expands in this manner: Companies first use Web services for small, one-off projects and then, as those smaller initiatives succeed, start deploying SOA across the entire enterprise.

To be successful, such an expansion

needs to be accompanied by a shift in thinking about what SOA requires from a business process standpoint.

Elevating Web services from application integrators to enterprisewide SOA adds complexity, which creates challenges. These include figuring out which applications ought to consume services, and how they should do that. For this shift to occur successfully, IT managers need to ask different questions than they did during the technology's earlier days.

"The broader view of SOA is that it's an application and system design environment" that can enable greater business agility, says Sandra Rogers, an analyst at IDC. But this broader role requires the services to be well designed and well thought-out, both as representative elements of the business and as components of business processes.

One approach is to base SOA on "dynamic" services that can be reused and built to work with multiple business applications. But to do this well, IT staffers need to pay close attention to how the code is managed. Management tools and repositories are key.

> **"You don't get high marks anymore for simply writing Web service wrappers around existing applications. SOA is more problem-based now.**
>
> **HAMESH YADAV,** LEAD SYSTEMS ARCHITECT, WELLS FARGO & CO.

Whatever you do, don't skimp on planning. Companies that have changed the way they think about and present SOA as a suitable technology have more successful SOA rollouts, says Anne Thomas Manes, an analyst at Burton Group in Midvale, Utah.

She advocates an interesting way of doing that. "Discussion of SOA should move underground. IT groups should stop trying to sell SOA to the business. Instead, they should just apply SOA principles to specific projects they execute," says Manes.

In other words, IT groups need to exploit SOA's more subtle advantages. These benefits "ensure that the software is more manageable, more maintainable" and easier to integrate, which in the long run makes IT more cost-effective and agile, she says.

Her bottom line: Don't just talk about SOA; show that it works.

MassMutual's Kim agrees. "One reason we were successful was we standardized the architectural process five or six years ago. The architects must also understand the business, and we had that foundation — both business and technology at the company. The board of directors paid attention, and we had the executive support."

But IT managers need to be careful. "As you build out your SOA, you have to continually remind yourself that SOA is not about the technology," Cigna's Bergeron says. "All too often, IT gets caught up in the 'technology for the sake of technology' trap and loses sight of the business objectives that need to drive our work. With all the products, technology and standards that are available to support SOA, it's an alluring distraction." ■

Webster *is a freelance writer in Providence, R.I.*

UMUC

INFORMATION ASSURANCE

PROTECT VALUABLE INFORMATION.
IMPRESS POTENTIAL EMPLOYERS.

Cyberterrorism prevention. Data and information systems protection. Disaster recovery planning. Information assurance jobs are a top priority in the public and private sectors. Earn an undergraduate or graduate degree or certificate online from University of Maryland University College (UMUC). You'll engage in real-world projects and gain the knowledge employers demand.

- Designated as a National Center of Academic Excellence in Information Assurance Education by the NSA and the DHS
- Programs focus on theory and provide hands-on experience
- Scholarships, loans and an interest-free monthly payment plan available

Enroll now. Call 800-888-UMUC
or visit umuc.edu/mychallenge

UMUC
University of Maryland University College
Copyright © 2010 University of Maryland University College

Just Watching Is No Longer Enough

It may be time to **supplement monitoring** the network with **endpoint security.**

Trouble Ticket

AT ISSUE: The company's intellectual property has to be secured.

ACTION PLAN: Endpoint technology is attractive in theory but hard to implement. For now, port blocking might be all that can be done.

WHEN I visit my company's overseas offices, I'm often asked what we can do to control USB ports and other external connectors in order to prevent the loss of intellectual property. That's a goal I'm always interested in pursuing.

I would say that at this point we have a fairly mature network data leak prevention (DLP) infrastructure. Not that it's near where I would like it to be. We don't have 100% coverage of every egress point in the organization. We're not monitoring our internal LAN traffic, and we don't have all the product divisions signed up to use our DLP tools. But I still consider the infrastructure mature, since we have processes in place for monitoring the network and conducting investigations once we do implement endpoint security technology.

A strong case can be made for doing that, but implementation can be a nightmare. I have the battle scars to prove it.

A couple of years ago, we were swept away by the sales pitch from a fairly new vendor whose offering, it turned out, was rather immature. We decided to try it, and the only good news about what happened next is that the deployment was limited.

Deploying endpoint technology is never easy, and that may be especially true in my company. With so many engineers, we can't maintain a standard operating system profile across the enterprise. And because users have administrative access to their PCs, they are free to install programs; that makes it difficult to keep up with what applications need to be tested with the endpoint DLP technology. Finally, our engineers are often engaged in computer-aided design and source code development, which are intensive applications.

■ **Deploying endpoint technology is never easy, and that may be especially true in my company.**

In any event, thinking we had a stable release to try out, we decided to remotely deploy the start-up's technology to our development office in Moscow, where we have 50 software engineers. Many of those engineers' PCs froze or blue-screened. We lost several development cycles as a result and missed the launch date for one of our products.

Naturally, we abandoned that project, but to this day many people here get a bad taste in their mouths if endpoint DLP is brought up, and the mere mention of that vendor's name makes some of us cringe.

NO DISRUPTIONS

The problem is that endpoint software is a disruptive technology, since it works by intercepting system calls and replacing other system files. It has to do this if it's going to identify, track and secure data at rest, in use and in motion, no matter what application is used. And it needs to be aware of every application in use in the enterprise, including Exchange and webmail, instant messaging, Skype and Windows File Sharing, as well as the movement of data to CD, DVD or USB devices. And the technology needs to be sophisticated enough to allow the use of benign USB devices such as keyboards and mice.

Yet another roadblock to endpoint DLP adoption is that the technology isn't one-size-fits-all; it needs to be tuned to each set of employees. Managing that sort of thing would take additional staff and new training for the help desk. So, although we're currently evaluating some DLP vendors, I'm inclined to look elsewhere for the protection we need right now.

One option I'm considering is port blocking. I'm going to start looking at vendors in that market, including Trend Micro, which is our antivirus and antispyware provider. It could be convenient if we can do it all from one Trend Micro Control Management console. But I would be remiss if I didn't check out other vendors as well. ■

COMPUTERWORLD.COM

JOIN IN

To join in the discussions about security, go to **computerworld.com/blogs/security**

This week's journal is written by a real security manager, **"Mathias Thurman,"** *whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com.*

■ OPINION

Bart Perkins

Certifications Are No Longer Optional

FOR MANY YEARS, IT management has preached standardization — within IT and across the corporation. Yet at the same time, we have largely failed to standardize IT skills within our own organizations or across the industry. Certifications can help there, but for much of IT's history, such credentials have often been overlooked or undervalued in the hiring process.

That's changing.

Some employers are beginning to require certs for a wide range of jobs, and they often adjust salaries accordingly. With so many job seekers to choose from, employers need to quickly identify those who have the skills they seek. Granted, technical certifications do not guarantee that applicants will have the people and political skills that it takes to succeed in a corporate environment, but they can help employers triage résumés. And they're helpful in avoiding the costs and productivity losses associated with training new hires. For new college graduates, a certification in programming says, "I know about more than the theories and models we learned about in school."

Outsourcers also favor certifications, since they add credibility to project proposals. So if your department gets outsourced, certs can influence whether you are offered a job with the outsourcer or become unemployed.

Nonetheless, many older employees eschew certifications, asserting that their college degrees and job experience are sufficient. That's unfortunate, because even experienced IT professionals benefit from certs that demonstrate their understanding of the latest developments in a particular area. Because most certs are awarded for three to five years and require continuing education, being certified demonstrates that an employee has taken the initiative to stay current in an ever-changing field. That's a trait that's important to most employers. And as technology continues to proliferate, specialized technical expertise will become increasingly valued.

■ Increasingly, jobs and salaries depend on certs.

For me, the question isn't whether you should get a certification; it's which certification you should pursue. Certifications have proliferated over the past five years. In 2005, Microsoft offered six technical certifications; today that number has increased to 46, and technical certification holders have nearly doubled, to 2.9 million. Other organizations, such as the Business Architects Association, the International Institute of Business Analysis and the Institute of Management Consultants, offer specialized certification programs. Many universities are also beginning to offer certifications.

There are even certs in IT management. The Project Management Professional (PMP) and ITIL Service Manager certifications are widely recognized and have a significant impact on hiring decisions. In fact, most of the federal government's RFPs for project managers list PMP certification as a requirement. Government contractors speculate that the PMP cert will soon be mandatory.

But all certifications are not created equal. The PMP, ITIL and Microsoft certifications will continue to be widely recognized. Over time, however, some of the lesser-known certs will likely be merged, making some obsolete. Meanwhile, when choosing between such certifications, select those that are ISO 17024-certified.

It's natural for certifications to grow in prominence as an industry matures and places more importance on professionalism. And the trend will continue. Many current IT managers are unfamiliar with the broad range of certs available, but as younger employees rise to management positions, certification will likely become a basic requirement, especially for more senior positions.

How many certifications are on your résumé? If the answer is none, you need to change that. The time is coming when the word *certified* will be a synonym for *employable.* ■

Bart Perkins *is managing partner at Louisville, Ky.-based Leverage Partners Inc., which helps organizations invest well in IT. Contact him at BartPerkins@LeveragePartners.com.*

Career Watch

■ **Q&A**

Andy Lester

The author of **Land the Tech Job You Love** thinks the way most of us look for a job is ineffective.

You say that conventional job-hunting techniques don't work for programmers, systems administrators and the like. Why is that? It's not that they don't work, but that they're not enough. Competition is tougher than ever in this economy, and just shotgunning résumés to every ad you see is a waste of time. When you're sending out 100 résumés that are all the same, you're not focusing on the one or two solid choices of jobs that are likely to be what you want and for which you're qualified. The other candidates for tech jobs are also going to be tech-savvy and well acquainted with using the Net for research. They'll know how to search on the Net for inside information about companies and the people who work at them. They will probably have extensive networks of contacts in LinkedIn. For nontech workers, this sort of know-how might be an advantage that wins the job, but for us in the computer world, it's standard.

What are good job-hunting skills to develop? Serious researching is at the top of the list. The hiring manager is praying that the next résumé, the next interview, will be the ideal candidate that he can hire so he can get back to work. Most candidates send out generic résumés, or walk into the interview jaded and uninterested. The techie who has done enough work to create a résumé and cover letter that addresses the needs of the company is far more likely to get the job. To do that, the candidate must research. She has to use information sources, from Google to the local library and the chamber of commerce, to find out about the company. That level of preparation tells the company, "I'm here to do serious work, and I care about landing *this* job." The other skill isn't a skill but self-knowledge. When we get caught up in the activity of job hunting, it's easy to forget that we need to find a job we love, or at the very least that we don't hate. Life is too short, and our hours at work too long, to spend time in a job that you don't love.

You say that a lot of jobs never get posted on job boards. How does a person go about getting a job like that? Job boards appeal to the geek. We're so used to finding everything we need with a few clicks in Google that we assume that all our job needs are on a few job boards. That's not the case. Don't get lulled into the idea that as soon as a company has a job opening, it's going to make a posting on Monster.com. Techies have to learn the value of social networking, and I don't mean Facebook and LinkedIn. It's important to make contacts with others so that when the time comes, the connections are in place. The hiring manager has his connections; he's working to have candidates referred to him, because all other things being equal, he's going to prefer hiring someone he knows or who is referred to him by someone he knows. The way to know about these jobs is by making the contacts, and making your skills and background known to them, before the job hunt starts.

– JAMIE ECKLE

Why Can't We Be Friends?

Managers are reluctant to be friended on Facebook by their employers and by their own bosses.

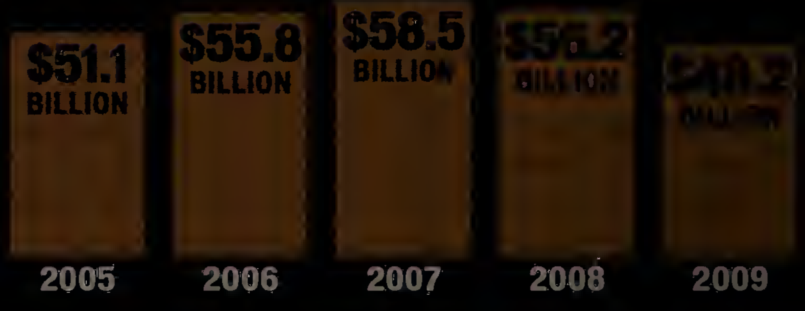
	How comfortable are you with being friended by someone you manage?	How comfortable are you with being friended by a superior?
Very comfortable	13%	19%
Somewhat uncomfortable	38%	28%
Not very comfortable	13%	15%
Not comfortable at all	29%	32%

Note: Figures do not add up to 100% because some respondents did not reply to these questions.

SOURCE: OFFICETEAM SURVEY OF150 RANOOMLY SELECTED SENIOR EXECUTIVES AT THE 1,000 LARGEST COMPANIES IN THE U.S., FALL 2009

Training Is Trailing

Total training spending in the U.S. fell sharply last year.



SOURCE: BERSIN & ASSOCIATES, SEPTEMBER '09

PAGE COMPILED BY JAMIE ECKLE.

Instantly Search Terabytes of Text

- ◆ 25+ full-text and fielded data search options
- ◆ Built-in file parsers and converters highlight hits in popular file types
- ◆ Spider supports static and dynamic web data; highlights hits with links, formatting and images intact
- ◆ API supports C++, .NET, Java, SQL, etc. .NET Spider API. Includes 64-bit (Win/Linux)
- ◆ Fully-functional evaluations available

Content extraction only licenses also available

"Bottom line: dtSearch manages a terabyte of text in a single index and returns results in less than a second" — InfoWorld

dtSearch "covers all data sources ... powerful Web-based engines" — eWEEK

"Lightning fast ... performance was unmatched by any other product" — Redmond Magazine

For hundreds more reviews, and hundreds of developer case studies, see www.dtSearch.com

1-800-IT-FINDS • www.dtSearch.com

The Smart Choice for Text Retrieval® since 1991

Personalized IT newsletters from Tech Dispenser.

You pick the topics.
You pick the sources.
You pick the frequency.

Build your own newsletter featuring your favorite technology topics — cloud computing, application development, security — over 200 timely topics, from more than 700 trusted sources.

Get started today. It's free.
www.techdispenser.com

TECH DISPENSER

MicroGoose
Climate Monitor
$199

Built-in Web Interface
Temperature & Humidity
Power over Ethernet Enabled
E-mail Alarms & Escalations
SNMP, XML, HTTP, HTTPS
Optional IP Web Cams

MicroGoose
$199

Receive our FREE BOOK
by emailing us at
CW@ITWatchDogs.com
with your mailing address
or call us at 512-257-1462

Sr. Database Administrator (Nashville, TN) Participate in the design, implementation and support of UDB/DB2 databases and systems utilizing minimum requirements. Provide technical leadership for DB 2 related initiatives, database administration and maintenance activities. Define and implement policies and procedures for ensuring the availability, security and integrity of the DB2 databases. Participate in 24 x 7 on call support rotation.

Must have a Bachelor's Degree or foreign degree equivalent in engineering, computer science or related field and 5 years of experience in the job offered or 5 years in a DBA production support position. Experience may have been obtained concurrently and must include: (i) 5 years experience in DB2 or UDB; (ii) 5 years experience with OS platforms in any combination of Linux, UNIX and Windows; (iii) 5 years experience with Capacity planning related to database storage, CPU and memory; (iv) 5 years of experience in any combination with both physical and logical database design; (v) 5 years of experience installing, configuring, and maintaining multiple DB2 or UDB production databases; (vi) 5 years experience in Optimizing the environment with respect to data access methods, access performance, space optimization, data integrity, system performance and system availability; (vii) 5 years experience administering and installing DB2 or UDB database fixpacks utilizing a formal change process; (viii) 5 years experience designing, implementing & troubleshooting backup/recovery of DB2 or UDB databases to ensure data integrity; (ix) 5 years experience performing performance tuning including creation & tuning of stored procedures, index creations, troubleshooting SQL statements and queries; (x) 5 years of Shell scripting experience in UNIX using any combination of Korn Shell, sed, awk and Perl; (xi) 2 years experience extended Enterprise Edition (EEE) partition databases configuring data warehouse applications; (xii) 5 years experience performing disaster recovery planning for database restoration in alternate locations; (xiii) 5 years experience providing support to multiple application development groups in the areas of any combination of database design and optimization; (xiv) 5 years experience with database monitoring procedures and utilities; (xv) 5 years experience in database security.

Must have legal authority to work in U.S. Any suitable combination of education, training or experience is acceptable. Resume to Regions Financial Corporation, Attn: Sandra Lee, 315 Deaderick Street, Nashville, TN 37237

Software Project Manager w/ Masters* or foreign equiv in Comp Sci or Engg & 1 yr exp. * Will accept Bachelors or foreign equiv in Comp Sci or Engg & 5 yrs progressive work exp in lieu of Masters* or foreign equiv & 1 yr exp in the following job duties: Manage, dvlp & implmt global n/work of SUN SOLARIS & REDHAT LINUX system s/ware in dvlpmt & production envrmts. Install, configure & maintain VERITAS & REDHAT GFS CLUSTER systems. Perform system & network admin, implmt & troubleshoot NFS, DNS, NIS & SNMP & SMTP. Dsgn & create s/ware pkgs & deploy scripts for s/ware distribution using PERL, HTML, TIVOLI & Sybase scripting. Dvlp, implmt & manage message bus using TIBCO RENDEZVOUS & SMARTSOCKETS. Exp as Sr. Systems Engineer acceptable. Supv. 2 Consultants. Mail res to Open Systems Technologies, 462 7th Ave, 15th Fl, NY, NY 10018. Job Loc.: New York / New Jersey.

With 35 branch offices located across the US, COMSYS is actively recruiting for the following positions.

SAS Programmer– metro Portage, MI – Code # PO180

Systems Analyst– metro Miami, FL – Code # PR100

Statistical Database Analyst – metro Mason, OH – Code # MA120

Systems Analyst– metro San Jose, CA– Code # SJ120

Programmer Analyst – metro Minneapolis, MN– Code # MI120

Roving employment to varying jobsites throughout the US. Please refer to appropriate job code when submitting resume to: COMSYS, Attn. Nancy Theriault, 15455 N. Dallas Pkwy., Ste 300, Addison, TX 75001. EOE./MF/DV

Software Project Manager needed w/Masters* or foreign equiv. in CS or Engg. & 1 yr. exp. *Will accept Bach. Or foreign equiv. in CS or Engg. & 5 yrs of progressive work exp in lieu of Masters* or foreign equiv. & 1 yr. exp. in the following job duties: Plan, manage & eval. tech'l feasibility of bus. reqmts. Dsgn & dvlp various project modules as per user specs. Dvlp, integrate, test, deploy & maintain s/ware systms using Java, JSP, Servlets, JMS, Hibernate, Struts, Web Services, Eclipse, XML, Sybase, Weblogic & HTML. Conduct tech'l trainings & peer code-reviews. Supv. 2 Consultants. Mail res to: IT & EBusiness Consulting Services Inc., 469 Seventh Ave., 4th Fl, Ste 17, NY, NY 10018. Job Loc: New York / New Jersey / CT

Software Project Manager w/ Masters* or foreign equiv. in Comp Sci or Engg & 1 yr. exp. * Will accept Bachelors or foreign equiv in CS or Engg. & 5 yrs of progressive work exp. in lieu of Masters* or foreign equiv. & 1 yr. exp. in following job duties: Dvlp IT systms for Fund Acctg & Investor Servicing businesses. Dvlp various reporting systms on industry std. platforms Advent Geneva & Advent Partner. Build, enhance, maintain & support various bus. s/ware applics using Java, J2EE, Struts, XML, iBatis, TagLibs, Rules, Shell/Perl Scripts, Tomcat & RDBMS such as Microsoft SQL server & Sybase on Unix & Linux platform. Exp as a Technical Manager or Sr. Associate-Projects is acceptable. Supv. 2 Consultants. Mail res to: Open Systems Technologies, 462 7th Ave, 15th Fl, NY, NY 10018. Job Loc.: New York, New Jersey.

Team Lead - Manage day to day activities of an ST&E team such as assessment scheduling, resource mgmt, & customer interaction in Denver, CO. Reqs incl. a Masters deg. in Info Systms Security or rel. field or eqv. & working knowl. of NIST Special Publication 800 Series & NESSUS Testing Tool. Resume to: Kamal Tamton, NexGen Technologies, Inc., 1490 West 121st Ave., Ste 105, Westminster, CO 80234.

LM Group located in Santa Fe Springs, CA seeks a Programmer Analyst with Bach Comp Info Systems and 1 yr exp writing test cases; blackbox, whitebox, functional & regression testing using WinRunner; writing test plans for multiple scenarios. Email resumes to Reet Rand HR Manager at jobs@lmgroup.org or fax to 949-419-6663

S4 Consultants (Woodlands, TX) seeks software/hardware engineers, system/programmer analysts, DBAs to customize application using tools like Oracle, Java, C/C++, VB, SAP. Min MS or BS with 1-5yr IT exp. Jobsite various. Send resumes to jobs@s4consultants.com. EOE.

Cardus, Inc. seeks programmer analyst, DBA to develop IT-enabled service software & IT systems/application. Must have MS or BS+5yr IT experience. Send resume to 32969 Hamilton Ct, Ste 120, Farmington Hills, MI 48334. No calls.

Organic, Inc (Bloomfield Hills, MI) seeks QA engineer to perform manual/automated test cases, monitor and resolve defects. Require MS or BS with 5-yr exp. Send resumes to newbiz@organic.com.

Invensys, Inc. seeks programmer/analyst, business analyst, DBA to design applications using skills of Oracle, Java, VB.Net, SAP etc. Travel required. Must have Master or BS with 1-5yr exp. Send resumes to resume@invensysinc.com. EOE

Looking for something new?

You've come to the right place!

Check back with us weekly for fresh listings placed by top companies looking for skilled professionals like you!

IT|careers

ATTENTION...

Law Firms
IT Consultants
Staffing Agencies

Are you frequently placing legal or immigration advertisements?

Let us help you put together a cost-effective program that will make this time-consuming task a little easier!

Place your Labor Certification Ads here!

For more information contact us at:

800.762.2977

IT|careers

SharkTank

TRUE TALES OF IT LIFE AS TOLD TO SHARKY

'Impossible,' Redefined

Company president calls the IT department to ask how to recall an e-mail message. Impossible, tech tells him. But the next day, IT manager calls several staffers in and says they *must* get that two-week-old e-mail and its attachment back – and they can't let any of the 70 recipients know what they're doing. "So I started calling people for their passwords and IP addresses," says this pilot fish on the team. "I told them we had to check their computers for 'viruses and stuff.' Then I remotely controlled their PCs to enable remote desktop, which locks the computer so the user can't see what's going on. Then the other IT staffers went through each PC's in-box, sent items, deleted items and computer folders, just in case the user had saved the file in question. It took us a day and a half. What was in the e-mail? Apparently, the payroll information for the entire company was accidentally included on the second tab of a spreadsheet attached to the e-mail. The things I do for my company. . . ."

Oh, THAT Way

IT pilot fish is fed up with manually dealing with backup problems. "I had to reset the daemons database and put the tape back in the autoloader before the batch could rerun a failed backup," he says. "Simple solution was to write a script that checks these things and sorts everything out if it's not correctly configured. After completing this script, I mentioned it to my manager, and a colleague piped up, 'We looked at that when we wrote the backup script in the first place, and it's impossible.' My reply: 'Why didn't you tell me that 20 minutes ago, before I wrote the script that sorted the problem out?' He went strangely quiet, took the script, checked it and, with the comment, 'Oooh, you're doing it *that* way,' quietly disappeared into the computer room."

In a Safe Place

User calls support pilot fish because he has forgotten his PC's password. "The user informed me that he didn't want it reset but instead wanted to use the one that he had just changed it to," says fish. "I informed him that wasn't possible but that he could always change it back later. He insisted that it be set to the one he'd just changed it to and said that he had made a note of it. So, why doesn't he just refer to that note? It turns out that he had saved it in a Word document on his PC. I logged into his machine as admin and retrieved the file with his password, and then told him his password over the phone. But I can't tell you how tempted I was to inform him that I would e-mail it to him and he could retrieve it from his in-box."

■ *It's always possible to send Sharky true tales of IT life at sharky@computerworld.com. I'll file off the identifying marks, and you'll score a sharp Shark shirt if I use yours.*

COMPUTERWORLD.COM

NEED TO VENT YOUR SPLEEN?
Toss some chum into the roiling waters of Shark Bait. It's therapeutic!
sharkbait.computerworld.com

CHECK OUT Sharky's blog, browse the Sharkives and sign up for Shark Tank home delivery at **computerworld.com/sharky.**

■ COMPANIES IN THIS ISSUE

Page number refers to page on which story begins. Company names can also be searched at computerworld.com

AIIM 5
Apple Inc. 19, 21
Bersin & Associates 32
Booz & Co. 18
Burton Group 29
Business Architects Association 31
CenterBeam Inc. 22
Ciao GmbH 10
Cigna Corp. 28
CIO Executive Board 23
Clean Harbors Inc. 19
Cutter Consortium 19
Denver Health and Hospital Authority 8
Facebook Inc. 32
Fletcher Allen Hospital 8
Forrester Research Inc. 28
Foundem 10
Gabriel Consulting Group Inc. 10
Gartner Inc. 6, 18
Google Inc. 5, 10, 21, 32
IBM 6, 16
iComp 10
IDC 21, 29
Institute of Management Consultants 31
International Institute of Business Analysis 31
JDalal Associates LLC 24
Johnson Controls Inc. 6
Leverage Partners Inc. 31
LinkedIn Corp. 32
Massachusetts Mutual Life Insurance Co. 28
Microsoft Corp. 10, 21, 31
Mitre Corp. 5
Monster Worldwide Inc. 32
National Aeronautics and Space Administration 12
National Research Council 6
OfficeTeam 32
Ouellette & Associates 23
PDR Network LLC 23
Research In Motion Ltd. 21
SANS Institute 5
Scottrade Inc. 18
Semiconductor Equipment and Materials International 22
Skype Ltd. 30
Stanford University 12
SunPower Corp. 12
The Open Group 28
Trend Micro Inc. 30
Tri-City Emergency Medical Group 8
U.S. Census Bureau 6
U.S. Department of Health and Human Services 8
Wells Fargo & Co. 28

1&1 Internet 13
1and1.com
dtSearch 33
dtsearch.com
IBM ES Intel C4
Ibm.com/systems/3monthrol
IBM IT Intel C2-1
ibm.com/hs22
Google C3
google.com/gonegoogle
ITWatchDogs 33
itwatchdogs.com
Microsoft 9
itseverybodysbusiness.com/virtual
Microsoft Management Summit 2010 19
mms-2010.com
Microsoft 27
port25.technet.com
Qwest 3
qwestsolutions.com
SaaScon 2010 15
saascon.com
Sprint 7
sprint.com/convergence
University of Maryland 29
umuc.edu/mychallenge
Workday 11
workday.com/bottomline

This index is provided as an additional service. The publisher does not assume any liability for errors or omissions.

Periodical postage paid at Framingham, Mass., and other mailing offices. Posted under Canadian International Publication agreement PM40063731. **CANADIAN POSTMASTER:** Please return undeliverable copy to PO Box 1632, Windsor, Ontario N9A 7C9. Computerworld (ISSN 0010-4841) is published twice monthly by Computerworld Inc., 492 Old Connecticut Path, Box 9171, Framingham, Mass. 01701-9171. Copyright 2010 by Computerworld Inc. All rights reserved. Computerworld can be purchased on microfilm and microfiche through University Microfilms Inc., 300 N. Zeeb Road, Ann Arbor, Mich. 48106. Computerworld is Indexed. Back issues, if available, may be purchased from the circulation department. Photocopy rights: permission to photocopy for internal or personal use is granted by Computerworld Inc. for libraries and other users registered with the Copyright Clearance Center (CCC), provided that the base fee of $3 per copy of the article, plus 50 cents per page, is paid directly to Copyright Clearance Center, 27 Congress St., Salem, Mass. 01970. Reprints (minimum 100 copies) and permission to reprint may be purchased from Ray Trynovich, Computerworld Reprints, c/o The YGS Group, Greenfield Corporate Center, 1808 Colonial Village Lane, Lancaster, Pa., 17601, (800) 290-5460, Ext. 148. Fax: (717) 399-8900. Web site: www.reprintbuyer.com. E-mail: computerworld@theygsgroup.com. Requests for missing issues will be honored only if received within 60 days of issue date. Subscription rates: $5 per copy: Annual subscription rates: – $129; Canada – $129; Central & So. America – $250; Europe – $295; all other countries – $295. Digital annual subscription rate: $29.99. Subscriptions call toll-free (888) 559-7327. **POSTMASTER:** Send Form 3579 (Change of Address) to Computerworld, PO Box 3500, Northbrook, Ill. 60065-3500.

OPINION

Thornton A. May

Are You Paying Vendors Enough?

MANY OF my colleagues think that we are spending too much on IT. I disagree. In some ways, we are spending way too little.

Lest you think that I am spouting crazy talk and advocating a career-shortening approach that would bring down the wrath of your CEO and CFO, consider this exchange, which occurred at a meeting of a major aerospace and defense company's senior executive committee. The CIO was saying that he was going to "squeeze money" out of his vendors. The CEO's response: "When you talk about 'vendors,' I think of the people who stock candy in the vending machines. As the CIO, you work with technology suppliers, who help us keep our nation's fighting men and women safe." As for squeezing money out of such suppliers, the CEO said that the focus of any enterprise he led would not be cost reduction but value optimization and mission enablement.

Not every CEO is so enlightened, but we are reaching a point where many executives will realize that it is time to embark on a new relationship with technology suppliers. Here in the 21st century, the economy is dependent on information technologies. Technology suppliers are key to any IT leader's ability to deliver value to the enterprise. And yet IT suppliers are frequently portrayed as some kind of value villain. That has to change.

IT leaders need to stop spanking suppliers and start thanking them. In *Drive: The Surprising Truth About What Motivates Us*, Daniel Pink contends that "you have to pay people enough." If a supplier believes it is not being paid enough, it "will do the minimal amount necessary not to be replaced but not a peppercorn more." One of the best uses of money, says Pink, is to pay people enough to take the issue of money off the table; then they will be focused not on money but on the work. If we could change the focus of our attention from what we pay (the cost) to what we receive (the value), we would be taking an important step in materially improving supplier management.

IT leaders need to stop spanking and start thanking suppliers.

Seth Godin, in his brilliant new book, *Linchpin: Are You Indispensable?*, posits that "we are moving . . . to an economy where the people who win do so by doing stuff we didn't expect and didn't ask for." Don't you want to go there? Think about it. When was the last time a provider did something good that you didn't expect or ask for?

But change has to come to both sides of the equation. One of the major reasons technology suppliers fail to be perceived as value linchpins is poor messaging. Can you recall the last time you saw a vendor presentation at a trade show that made you lean forward and take notes? Sadly, at most events these days, as soon as a supplier takes the podium, the audience assumes the "BlackBerry prayer" position and starts processing e-mails. At the end of the presentation, there are rarely any questions. Is that the fault of the smartphone? To some extent, perhaps, but I think a compelling message would still make everyone sit up and listen.

What's more, suppliers need to re-examine the platforms they select for delivering their messages. Case in point: For the life of me, I cannot see how a technology supplier that sponsors the Olympics or hires expensive pro-athlete spokespeople is doing anything that improves your ability as an IT leader to deliver value to your enterprise. Wouldn't those millions of dollars be better spent establishing knees-under-the-table, substantive conversations about how to exploit the amazing technologies available to us today?

In other words, both the buy side and the sell side of the IT value equation need to jettison some long-held beliefs and behaviors. ■

Thornton A. May *is a longtime industry observer, management consultant and commentator. You can contact him at thorntonamay@aol.com.*

Konica Minolta
has gone Google.

“Going Google” means switching to Google Apps: an online email, calendar, and document program that’s based on the web. Join Konica Minolta Business Solutions U.S.A. and more than 2 million other businesses that have gone Google. Learn more at www.google.com/gonegoogle.

© 2010 Google Inc. All rights reserved. Google and Google logo are trademarks of Google Inc.
Konica Minolta is a trademark of Konica Minolta Holdings, Inc.

Google Apps

Out with the old. In with the affordable.

Did you know? By replacing your aging servers with IBM® System x3650 M2 Express® servers powered by the Intel® Xeon® processor 5500 series, you could dramatically lower your IT operating expenses. **Here's how:** 1. With more computing power, you can run your applications on fewer servers. 2. Running fewer servers means reducing software licensing fees. 3. Enhanced systems management helps lower operational costs. 4. New energy-efficient servers reduce power consumption and cooling costs. Doing more with less has never been so important. And thanks to the people and Business Partners of IBM, it's never been easier. Learn how IBM System x® could help you see a return on investment in as little as three months[1] at **ibm.com/systems/3monthroi**

intel Xeon inside

Powerful. Intelligent.

IBM System x3650 M2 Express

$3,439

or $87/month for 36 months[2]

PN: 794764U

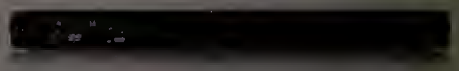
Featuring up to 2 Intel® Xeon® x5540 processors (2.53 GHz)

16 DIMM sockets 1333 MHz DDR-3 RDIMMs (128 GB max)

IBM System x3250 M3 Express

$1,535

or $39/month for 36 months[2]



PN: 4252E1U

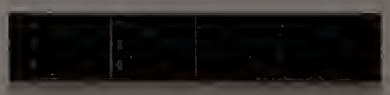
Featuring Intel® Xeon® x3450 processor (2.67 GHz), 2x2 GB Open Bay with MultiBurner

DDR-3 ECC memory, up to 1333 MHz; 1 GB, 2 GB and 4 GB UDIMMs, 16 GB UDIMM max;[3] 1 GB, 2 GB, 4 GB and 8 GB RDIMMs; 32 GB RDIMM max[3]

IBM System Storage™ DS3400 Express

$9,295

or $235/month for 36 months[2]



PN: 172642X

External disk storage with 4 Gbps Fibre Channel interface technology

Scalable to 3.6 TB of storage capacity with 300 GB hot-swappable SAS HDDs or up to 9 TB of storage capacity with 750 GB hot-swappable SATA HDDs

Try the IBM Systems Consolidation Evaluation Tool today

Learn how IBM System x could help you see a return on investment in as little as three months:

ibm.com/systems/3monthroi

1 866-872-3902 (mention 6N8AH26A)

IBM

[1] To learn how the return on investment was calculated, visit ibm.com/systems/xroi. [2] IBM Global Financing offerings are provided through IBM Credit LLC in the United States and other IBM subsidiaries and divisions worldwide to qualified [illegible] and government customers. Monthly payments provided are for planning purposes only and may vary based on your credit and other factors. Lease offer provided is based on an FMV lease of 36 monthly payments. Other restrictions may apply. [illegible] offerings are subject to change, extension or withdrawal without notice. [3] Maximum UDIMM support for 16 GB when 4 GB DIMMs are available 1Q 2010, and maximum RDIMM support for 32 GB when 8 GB DIMMs are available 1Q 2010. IBM [illegible] products are manufactured from new parts or new and serviceable used parts. Regardless, our warranty terms apply. For a copy of applicable product warranties, visit http://www.ibm.com/servers/support/machine_warranties. IBM makes no [illegible] warranty regarding third-party products or services. IBM, the IBM logo, System Storage and System x are registered trademarks or trademarks of International Business Machines Corporation in the United States and/or other countries. [illegible] of IBM trademarks, see www.ibm.com/legal/copytrade.shtml. Intel, the Intel logo, Xeon and Xeon Inside are trademarks of Intel Corporation in the U.S. and other countries. All other products may be trademarks or registered trademarks of their [illegible] companies. All prices and savings [illegible] are subject to change without notice, may vary according to configuration, are based upon IBM's estimated retail selling prices as of 10/2/09 and may not include storage, hard drive, operating system [illegible]. Reseller prices and savings to end users may vary. Products are subject to availability. This document was developed for offerings in the United States. IBM may not offer the products, features or services discussed in this document [illegible]. Contact your IBM representative or IBM Business Partner for the most current pricing in your geographic area. © 2009 IBM Corporation. All rights reserved.